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ABSTRACT

As part of a project which outlines the role that postsecondary education can and should take in a world approaching its growth limits, this resource directory indicates the nature of current efforts related to growth problems. From a broad range of persons contacted by mailed questionnaires, the directory includes information from 88 representatives of research organizations and university departments concerned with growth problems. Each respondent gives a description of the subject matter of his work, the kinds of activities pursued, the goals set, the people targeted in the work, the nature of any future plans, name, position, name of institution, funding resource, and a short narrative description of the project's purposes and strategies. In addition, indices are provided for disciplines, geographical locations, activities, and institutions involved. (Author/DE)

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RESOURCE DIRECTORY ON GROWTH AND EDUCATION

SCIENCE MUSEUM OF MINNESOTA
OCCASSIONAL PAPER ON THE FUTURE

VOLUME 2, NUMBER 1 JUNE 1975

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RESOURCE DIRECTORY ON EDUCATION AND GROWTH

BY
DOUGLAS SACARTO

A SCIENCE MUSEUM OF MINNESOTA
OCCASIONAL PAPER ON THE FUTURE

T. LANCE HOLTHUSEN, EDITOR

A PUBLICATION OF THE
FUTURES STUDIES DEPARTMENT

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PHILIP S. TAYLOR, DIRECTOR

CONTENTS

ACKNOWLEDGMENTS i

EDITOR'S PREFACE ii

PREFACE iii

INTRODUCTION v

RESPONDENTS 1

INDEXES 117

A. DISCIPLINES 119

B. GEOGRAPHICAL LOCATIONS 121

C. ACTIVITIES 123

D. INSTITUTIONS 125

ACKNOWLEDGMENTS

We are indebted to the Western Interstate Commission for Higher Education for allowing us to publish portions of the results of the "Project to Study the Implications of Growth Policy for Post-secondary Education". We are particularly appreciative of our good friend, Lewis J. Perelman, Director of the Project, for helping to make this possible.

Since the Rockefeller Brothers Fund has provided the overall support for making this study possible, we wish also to express our gratitude for their important role in this effort.

Last, and very important, we wish to acknowledge the continuing and generous support of the Sperry Univac Corporation for making the printing of this publication possible. We must certainly go beyond our general acknowledgment to especially thank Earl C. Joseph, Staff Scientist with Sperry Univac Corporation, whose energetic support for many of this department's activities we are indebted.

EDITOR'S PREFACE

Our purpose for publishing the Bibliography (Volume 2, Number 1) and the Resource Directory (Volume 2, Number 2) is for use as part of The Science Museum of Minnesota Futures Workshop Series. We also want to support the superlative work of the Western Interstate Commission for Higher Education.

These particular volumes are part of a larger study called "The Project to Study the Implications of Growth Policy for Postsecondary Education" under the direction of Drs. Lewis J. Perelman and William H. Bergquist, for the Western Interstate Commission for Higher Education. The Bibliography and Resource Directory are part of the third objective of that study to "identify and assess resources...." The project is funded by a grant from the Rockefeller Brothers Fund.

Part of the problem that we see is the lack of communication about the many resources pertaining to important subjects in the futures field. The purpose of The Science Museum of Minnesota Occasional Paper on the Future is to make available some of the important and helpful resources that would otherwise remain unavailable in both hard-copy and microfiche.

We feel that these materials contribute to that end as resource materials that can be used directly in the classroom as student aids for study projects, or for background material for research for curriculum planning and writing.

PREFACE

The Resource Directory on Growth and Education was one dimension of a four-month project to outline the role postsecondary education can and should take in a world approaching its growth limits. The project, begun August, 1974, was financed by the Rockefeller Brothers Fund and headed by Drs. Lewis Perelman and William Bergquist under the sponsorship of the Western Interstate Commission for Higher Education.

The intent of the directory was to indicate the nature of current efforts related to growth problems. From the rather broad range of persons contacted by mailed questionnaire, eighty-eight applicable responses, national and international, were received. These are compiled in the directory.

In the questionnaire the respondents gave a description of the subject-matter of their work, the kinds of activities pursued, the goals set, the people targeted in their work, and the nature of any future plans. The questionnaire included a check-off list for activities, disciplines, and target populations, and a series of questions which elicited short descriptions of the respondents' purposes and strategies.

The directory parallels this format, alphabetized by respondent, with the descriptive portions of the questionnaire summarized for each entry. In addition, indexes are provided for disciplines, geographical locations, activities, and institutions involved.

We wish to express our appreciation to several persons for the crucial assistance they generously provided in developing this directory. JoAn Segal and Claudia Harris, who are the life of the WICHE library, were indispensible in the solution of reference and bibiliographic conundrums. Nancy Barber, WICHE Staff Associate, could always be depended on for good advice on directory development. Finally, Flora Bovis, the directory's expert typist, is owed special thanks for the virtues of the directory layout and, most especially, for being ever a joy to work with.

A need almost universally expressed by the respondents was

for increased communication with other professionals working in related problem areas. The value of this directory is assured if it can help to integrate the clearly widespread efforts that now exist. This is our hope, and we want to thank those who responded to this project.

INTRODUCTION

(Taken from Growth and Education, A Strategic Report to the Rockefeller Brothers Fund on the Implications of Growth Policy for Postsecondary Education, 1974, Appendix B, pp. 70-73)

PROGRAM STATEMENT

Problem

In the past few years, widespread concern about the problems posed by the growth of human population, resource consumption, waste generation, and other forms of material economic activity, has increased dramatically. Throughout the world, and at all levels of society, there is now an urgent and increasing interest in the quantity and the quality of growth.

In the United States, at the grass roots level, there has emerged what the Task Force on Land Use and Urban Growth, sponsored by the Rockefeller Brothers Fund, dubbed a "new mood", characterized not only by open questioning of the goals of endless material growth, but also by overt, organized and forceful citizen action to slow if not totally halt further economic "development" and population growth in an increasing number of communities and states. At all levels of government, there is increasing recognition of the need for comprehensive, long-term growth policy, embracing such areas as population, community development, racial/ethnic integration, housing, land use, transportation, environmental protection, energy production, resource exploitation, employment, etc. Local governments are more and more trying to control the rate and kind of growth occurring in their jurisdictions. A number of state governments are now engaged in the development of comprehensive, long-term growth policies, and nearly all states are now adopting policies dealing with specific aspects of state growth such as land use or environmental protection. At the national level, there have been at least ten major task force or commission reports over the last seven years concerned with national growth policy. A variety of legislation has been introduced dealing with specific aspects of growth policy, and two bills are pending in the U.S. Senate which would create formal governmental mechanisms to develop and implement a comprehensive, long-term national growth policy.

Internationally, many countries are now moving toward wide-ranging growth policies. The United Nations sponsored an international conference on the environment in Stockholm in 1972, and this summer will conduct a similar conference on population in Bucharest. A large number of international governmental and nongovernmental organizations are actively concerned with such areas of growth policy as trade, development, population, food, environmental protection, etc.

Pacing this rising concern for growth policy has been a growing recognition that our collective knowledge about the causes and

consequences of growth, and about how to achieve more balanced and stable alternatives to established patterns of material growth, is actually quite limited. In response to this lack of knowledge and understanding, scholarly investigation into the causes and consequences of growth and growth alternatives--studies largely neglected since the time of the classical economists of the last century--have now resumed in earnest. Within this area of scholarly activity, there has evolved an intellectual movement around such names as Forrester, Meadows, Mishan, Daly, Ehrlich, Hardin and others. This movement has seriously challenged the conventional wisdom about the desirability, the probability, and even the possibility of continued exponential growth in a finite world.

Of the several outstanding scholars participating in this intellectual movement, it is perhaps Professor Jay Forrester of MIT whose work has had the most critical implications for growth policy. In his studies of the behavior of industrial and urban systems, using the System Dynamics methodology which he had developed over a period of some 20 years, Forrester showed that the causes and consequences of growth and of decline in such highly complex, dynamic systems were poorly understood by those who had responsibility for managing such systems. Hence, Forrester demonstrated, policies which were conventionally proposed to solve various problems associated with the growth of such systems predominantly tended to produce results which were either unproductive or even counterproductive.

In a book entitled World Dynamics, Forrester used the same kind of analysis to demonstrate graphically the inherent instability of the existing world economic/ecological system. Elaborating on Forrester's World Dynamics model, the Club of Rome's Project on the Predicament of Mankind published its report entitled The Limits to Growth, in the spring of 1972. This report, produced by a team of systems scientists and engineers under the direction of Dr. Dennis Meadows, bore out the central conclusion of Forrester's World Dynamics study: that not only do limits exist theoretically for world population and material forms of economic growth--as Malthus, Ricardo, Mill and others have argued since more than a century ago--but that these limits are, in fact, on the verge of being reached. Indeed, the work of both Forrester and Meadows indicated that inadequate feedback and control mechanisms in the world system were likely to lead to an overshoot and subsequent catastrophic collapse of world population and industrial capacity. As often emerges in such System Dynamics analyses, these studies indicated that conventional, ad hoc policies designed to stave off disaster would not be likely to produce stability, and could actually make matters worse. On the contrary, what was clearly needed to achieve a stable equilibrium state in the world system was a coherent and comprehensive set of long-term growth policies, designed with an adequate understanding of the complexity and dynamic behavior of such a system.

As a result of the work of Forrester, Meadows, Herman Daly and the several other leading scholars who have been concerned with the "limits to growth", there has been generated a considerable amount of

controversy and debate about the nature of such limits and their impact on the behavior of real-world systems. Yet even while the debate about "limits" goes on, there has now emerged a school of thought which in some sense has gone "beyond limits". The members of this emergent school are less concerned with the basic question of whether there are limits to growth than they are with developing detailed and viable alternatives to conventional patterns of growth (that is, with developing models of potential equilibrium systems), and effective means for making those alternatives realizable.

There is a feeling generally held by members of the "beyond limits" school--and widely shared by other constituencies as well--that education has a crucial role to play in the resolution of the problems and issues related to growth policy. As the work of Forrester suggests, and as the general failure of conventional approaches to growth problems clearly demonstrates, the development and implementation of effective growth policy requires not only an attitude of concern, but also requires a far greater degree of competency in understanding and dealing with the behavior of complex social and ecological systems than the world's leaders and institutions now have. Clearly the cultivation of such competency is the responsibility of, and hence is a task of paramount importance for, our educational system. Some work has been done at the conceptual level on redefining the purposes and processes of education to respond to the needs of growth policy. Specifically, of the transition to an equilibrium state for education. There have also been a considerable number of ad hoc efforts to develop educational programs to meet these needs; e.g., a variety of courses and programs in schools and universities in the areas of environmental education, population education, urban studies, futuristics, etc. Yet there have so far been no detailed and comprehensive plans developed to clearly define, create and disseminate the kinds of educational innovations which the "beyond limits" school appears to be seeking. This, then, is the general problem to which this project is responding.

Objectives

The project proposed here will pursue four major objectives: 1) to define more clearly the goals which effective growth policy implies for postsecondary education; 2) to operationalize these goals; 3) to identify and assess existing resources that are applicable to these goals; and 4) to develop a strategy or strategies for the achievement of these goals.

RESPONDENTS

NAME: J.M. Anderson

POSITION: Associate Professor of Chemistry

INSTITUTION: Bryn Mawr College
Bryn Mawr, PA 19010
Phone: (215) LA5-1000 Ext.351

PRIMARY DISCIPLINE:
Chemistry and Physics
Mathematics and Computer Science
Ecological Science

ACTIVITY:
Theory and Model Development
Data Collection and Analysis
Instruction
Research Methodology
Publication
Instructional Materials

PRIMARY POPULATION:
Undergraduate
Graduate and Professional

SUMMARY:

Professor Anderson studies mathematical models for dynamic systems, and he aims his work in understanding the characteristics of stable environments at the educated public in general, in addition to smaller technical audiences and his students. One of the models he has developed is a simulation for Garrett Hardin's "Tragedy of the Commons."

NAME: Edward F. Babbott

POSITION: Research Associate

INSTITUTION: Management Institute for National Development
230 Park Avenue
New York, N.Y. 10017
Phone: (212) 889 5847

PRIMARY DISCIPLINE: Education: Primary and Secondary
Education: Postsecondary

ACTIVITY: Proposal Writing/Grantsmanship
Publication
Instructional Materials
Consulting

PRIMARY POPULATION: Primary or Secondary School
Undergraduate

FUNDING: Small private family foundation with some funds for specific projects from our sources

SUMMARY: Concentrating on grades 11-14, the Institute developes position papers, trial curricula, case studies and consults with educators and administrators in order to increase in U.S. schools instruction concerning global development.

NAME: Arthur Barber

POSITION: President

INSTITUTION: First Communications Co.
6917 Arlington Road
Bethesda, MD. 20014

PRIMARY DISCIPLINE: All Disciplines

ACTIVITY:

- Instructional Materials
- Mass Media
- Lobbying
- Alternative Life Style
- Governance
- Recreation
- Arts
- New Human Organizations For Use Of Media

PRIMARY POPULATION: General Public

FUNDING: Private Local Corporations

SUMMARY: The First Communications Company plans and implements locally owned cable television systems, including television and radio libraries. The company is striving successfully to increase public awareness of the educational possibilities of electronic media and of the public's own ability to select programming of its choice.

NAME: Gerald O. Barney

POSITION: Program Associate
Head of the Environmental Program

INSTITUTION: Rockefeller Brothers Fund
30 Rockefeller Plaza
New York, N.Y. 10583
Phone: (212) 247-8135

ACTIVITY: Grant Evaluation

PRIMARY POPULATION: Graduate and Professional
Citizen Groups

FUNDING: Rockefeller Brothers Fund

SUMMARY: "The Rockefeller Brothers Fund makes grants to local, national and international philanthropic organizations." The Fund concentrates its grants "in several fields which it is believed provide effective points of entry looking toward solution of overall societal problems. These include: population growth and distribution; conservation and constructive use of natural resources; equal opportunity; quality of life, including religion, values and the arts; and education."

NAME: Edward Batschelet

POSITION: Head

INSTITUTION: Biomathematics Division
University of Zurich
Gemeindestrasse 5
CH-8032 Zurich
Switzerland

Phone: 01-32 35 11

PRIMARY DISCIPLINE: Biology
Mathematics and Computer Science

ACTIVITY: Publication
Instruction

PRIMARY POPULATION: Undergraduate

FUNDING: University of Zurich

SUMMARY: From a systems analysis perspective, Dr. Batschelet informs his students and the reading public of the global danger of population growth. In conjunction, Dr. Batschelet is developing alternative models of stable populations.

NAME: Justin Blackwelder

POSITION: President

INSTITUTION: The Environmental Fund
1302 18th Street, N.W. #403
Washington, D.C. 20036

PRIMARY DISCIPLINE: Ecological Science
Economics
Education: Postsecondary
Population Growth

ACTIVITY: Data Collection and Analysis
Research Administration
Publication
Instructional Materials
Consulting

PRIMARY POPULATION: Graduate and Professional
Technical/Specialist Public

FUNDING: The organization is funded by the directors

SUMMARY:

"The Environmental Fund was created to focus public attention on the fact that exponential population growth is basic to most of our social problems. It is one of the causes of inflation, unemployment, food and energy shortages, resource scarcities, pollution and social disorder. The Fund's Directors believe that many of the problems facing the world today can only get worse, and that the quality of life of the world's peoples can only deteriorate, if population growth continues.

"The first priority of the Fund, therefore, is to create awareness, first in the United States and then elsewhere, of the fact that population must first be stabilized, and then, ideally, be allowed to return to a level where it would be possible for all people to live in reasonable comfort and dignity."

Justin Blackwelder writes, "For two years we have been searching for the top people in the many fields relative to the implications of growth--population, resource depletion, pollution, and economics. As we find these people we bring them to Washington, in groups never exceeding ten, for discussions which last approximately two days. The discussions are entirely unstructured; each participant talks about whatever he or she considers to be important."

The Fund pays the expenses of these people to go to Washington and advise officials in government, and it circulates without charge materials it considers important. Among these have been the books Famine 1975, by William and Paul Paddock; The Titanic Effect, by Kenneth Watt; and Population, Evolution, and Birth Control, by Garrett Hardin.

The Fund also publishes a news sheet titled "The Other Side," which it will mail on request without charge.

"This publication is issued in the spirit in which the Environmental Fund was established. We call it "The Other Side" to distinguish it clearly from the prevalent, popular, or conventional, views in many areas. We believe that helpful opposition to the conventional wisdom will require that all of the facts be squarely faced no matter how unsettling they may be. It is also an effort to stimulate thinking about the unthinkable.

It is intended for those who, like skeptics of old, doubt, question and even disagree. We propose here to provide them with a forum in which the most urgent of their findings may be aired, together with their most compelling insights and recommendations."

NAME: Asa Briggs

POSITION: Chairman

INSTITUTION: University of Sussex
Science Policy Research Unit
Martell Building
Brighton, BN1 9RG
U.K.

Phone: Brighton 686758

PRIMARY DISCIPLINE:
Ecology/Environmental Science
Economics
Engineering and Technology
Mathematics and Computer Science
Political Science and Government
Psychology and Psychiatry
Sociology and Anthropology

ACTIVITY:
Theory or Model Development
Research Methodology
Data Collection and Analysis
Publication
Instruction
Consulting

PRIMARY POPULATION:
Undergraduate
Graduate and Professional
General Public
Technical/Specialist Public

FUNDING: U.K. Research Councils; U.K. Government Agencies; U.K. Industry; International Organizations; Foundations.

SUMMARY: "Much of the rationale of science policy is that of the efficient use of national scientific and technological resources for long-term public goals such as economic growth and public welfare. In order to obtain relevant criteria for the ordering of priorities within this policy, it is necessary to try to foresee the ways in which the world may be influenced by technological advances, as well as future social requirements for new technologies. The Science Policy Research Unit (SPRU) is engaged in research with this aim in view.

"By means of its research reports and publications, the SPRU hopes to stimulate a wider (and better informed) public debate about these issues, both among policy-makers in industry and government and among the general public. It also hopes to stimulate an awareness of these problems and issues among students at both the undergraduate and graduate level." The SPRU participates in the University of Sussex through the History and Social Studies of Science Group, contributing its research results and instruction.

NAME:	Paul C. Buchanan
POSITION:	Faculty Member
INSTITUTION:	Federal Executive Institute Route 29N Charlottesville, VA 22903
PRIMARY DISCIPLINE:	Political Science and Government Psychology
ACTIVITY:	Instruction Instructional Materials Consulting
PRIMARY POPULATION:	Technical/Specialist Public
FUNDING:	Sell "shares" to Federal government agencies/ departments.

SUMMARY:

The Federal Executive Institute is an interagency training facility geared to the needs of high-level federal executives. It works to insure "high-level competence, responsiveness, and continuity among those near the top of government; to insure that executives in the Federal service are identified with the Government as a whole in the pursuit of national goals, objectives, and priorities; and to develop individual executive knowledge and skills in (management) processes."

With these objectives, the Institute is occupied in developing, within a residential, adult education setting, sensitivity to changing job needs and flexibility in job performance. The Institute plans to double its current capacity.

NAME: Charles M. Cargille

POSITION: President

INSTITUTION: World Population Society
P.O. Box 106, Eagle Station
Washington, D.C. 20016
Phone: (202) 686-3863

PRIMARY DISCIPLINE:

PRIMARY DISCIPLINE: Population Science

ACTIVITY: Publication
Sponsoring Scientific Meetings
Mass Media

PRIMARY POPULATION: Graduate and Professional
General Public

FUNDING: Membership Dues
Registration Fees
Loans from Members
Grants
Sale of Publications

SUMMARY: "The World Population Society, chartered in March 1973, represents a new multidisciplinary initiative to solve major world population problem. The Society addresses itself primarily to questions of population dynamics and to relationships between production, economics, national and international political stability and environmental quality."

The Society fosters multidisciplinary research, education and communication concerning world problems and "intends to make every effort to convince the world's key leaders, opinion molders and policy makers" of the importance of a multidisciplinary perspective. Among the specific objectives of the society is the establishment of a clearinghouse/secretariat for the collection, analysis, and dissemination of population research findings.

NAME: Craig Carlson

POSITION: Faculty Member, Communications Department

INSTITUTION: The Evergeen State College
Olympia, WA 98505

PRIMARY DISCIPLINE: Aesthetics/Applied Arts
Communications and Linguistics

ACTIVITY: Theory or Model Development
Alternative Life Style
Arts

PRIMARY POPULATION: Undergraduate

SUMMARY: "I make things using media and try to help other people make things using media." One of Professor Carlson's activities has been a project-oriented, group-directed undergraduate class in communication arts, developing sensitivity to the qualities and methods of various media. The class, with three faculty giving guidance, stressed group cooperation in projects integrated, through presentations and internships, into the community.

To foster both group awareness and individual introspection, a student engages in a variety of related efforts: "A typical work week will consist of meetings, a seminar with a small core group, workshops and laboratory experience, critiques, field trips, and studio projects. Each member of the group will maintain a journal reflecting self-discoveries and understandings."

NAME: Bernard Cazes

POSITION: Senior Civil Servant in charge of Long-Range Studies

INSTITUTION: Commissariat General Du Plan
18 Rue De Martignac
75007 Paris, France

PRIMARY DISCIPLINE: Economics
Sociology and Anthropology

ACTIVITY: Governance

PRIMARY POPULATION: General Public
Government Officials

FUNDING: State Budget

SUMMARY: The staff of the planning commissariat produces papers and reports for key policymakers on long- and mid-term policy impact over a wide range, from environmental to cultural and political.

NAME: John B. Cobb, Jr.

POSITION: Professor

INSTITUTION: School of Theology
Claremont, CA 91711
Phone: (714) 626-3521

PRIMARY DISCIPLINE: Philosophy and Religion

ACTIVITY: Publication
Instruction
Alternative Life Style

PRIMARY POPULATION: Graduate and Professional

SUMMARY:

Dr. Cobb is working to clarify the nature of Christian responsibility and to redefine the mission of the church within the context of global scarcities and growth limits.

Coordinate with his teaching, Dr. Cobb has developed an emphasis within the Claremont faculty on the implications of global constraints, and he has helped shape a four-year commitment of the School of Theology, including outreach to affiliated churches, on the problems of global responsibility.

Dr. Cobb has held two conferences in this area: "Theology of Survival," April 1970, and "Alternatives to Catastrophe," May 1972. He has also participated in the Ecology Task Force of the Southern California Council of Churches, which included workshops with local churches.

In addition, Dr. Cobb is vice-chairman of the Arcology Development Center which is promoting the work of Paolo Soleri. The group is now engaged in obtaining foundation funds to produce a film for television.

NAME: Richard W. Cortright

POSITION: Staff liaison for population education

INSTITUTION: National Education Association
1201 16th Street, N.W.
Washington, D.C. 20036
Phone: (202) 833-4187

PRIMARY DISCIPLINE: Education: Primary and Secondary
Education: Postsecondary

ACTIVITY: Instruction
Instruction Materials
Consulting

PRIMARY POPULATION: Primary or Secondary School
Graduate and Professional

FUNDING: Population Institute

SUMMARY: The National Education Association is involved currently in a project with the Rhode Island Education Association and The University of Rhode Island aimed at elementary and secondary school teachers in the state. Through training workshops, interviews and consultations, the processes and implications of population changes--local, national and global--are presented to the teachers to help them develop curricula in population study and alternative patters of growth.

In planning now is a program to repeat the Rhode Island effort nationally.

NAME: Brian Laird Crissey

POSITION: Research Associate

INSTITUTION: The Johns Hopkins University Metro Center
34th and Charles Streets
Shriver Hall
Baltimore, MD. 21218
Phone: (301) 366-3300 Ext.898 or 717

PRIMARY DISCIPLINE:
Ecology/Environmental Science
Economics
Mathematics and Computer Science
Political Science and Government

ACTIVITY:
Theory or Model Development
Research Methodology
Publication

PRIMARY POPULATION:
Undergraduate
Graduate and Professional

FUNDING:
Russell Sage Foundation
National Science Foundation

SUMMARY:

Dr. Crissey has been exploring means to better utilize computer models in policy decisions, in particular, energy use policy. New ways to use multiple computer models to offset biases in individual models have been a primary concern.

The project findings are being published as Models in the Policy Process, M. Greenberg, M. Crenson and B. Crissey.

A seventeen-month follow-up study of energy models and their use is also underway.

NAME: Andrzej Dąbkowski

POSITION: Senior Expert, Advisor and one of Main Designers of Integrated Information System for Central Planning

INSTITUTION: Planning Commission of Ministry Council
00-507 Warszawa
Plac 3 Kezyzy 3/5
Poland

Phone: 282280

PRIMARY DISCIPLINE:
Business and Management
Economics
Engineering and Technology
Mathematics and Computer Science
Political Science and Government

ACTIVITY:
Theory or Model Development
Data Collection and Analysis
Research Administration
Publication
Consulting

PRIMARY POPULATION:
Adult Continuing Education
Graduate and Professional
Technical/Specialist Public

SUMMARY: Andrzej Dabkowski has for a decade been working in the area of information theory, mathematical econometrics modelling, and applications of computer science in central planning. With scientists from the government Institute of Planning, he is currently constructing a computerized, 5-year national planning system for government needs.

NAME: James Allen Dator

POSITION: Director (Mr. Richard Barber, Acting Director during the absence of Dr. Dator - October 1974 - October 1976)

INSTITUTION: Hawaii State Research Center for Futures Study
711 Porteus Hall
University of Hawaii
2424 Maile Way
Honolulu, HI 96822
Phone: (808) 948-7360

PRIMARY DISCIPLINE: Political Science and Government

ACTIVITY:

Theory or Model Development	Instruction
Research Methodology	Instructional Materials
Data Collection and Analysis	Mass Media
Research Administration	Lobbying
Proposal Writing/Grantsmanship	Consulting
Publication	Alternative Life Style

PRIMARY POPULATION:
Undergraduate
Adult Continuing Education
Graduate and Professional
General Public

FUNDING: At present, State of Hawaii; business and labor groups contracting for specific services (e.g. construction industry computer-based model)

SUMMARY: The Research Center developes and adapts futures research methods for Hawaii; generates scenarios of alternative futures for Hawaiiand works to foster popular participation in futures research. This work is aimed at Hawaiian legislative, judicial and administrative government personnel; special interest groups; and the citizens of the state.

The approach is "simply to 'do everything at once' rather than to choose a small number of things and concentrate on them." Activities include development of computer models; television shows over public and commercial channels; multi-media presentations; public talks, speeches and fairs; and formal academic instruction.

NAME: James Allen Dator

POSITION: Director of the Futures Project

INSTITUTION: Ontario Educational Communications Authority
2180 Yonge Street
Toronto, Ontario
Canada

Phone: 484-2794

PRIMARY DISCIPLINE: Aesthetics/Applied Arts
Political Science and Government

ACTIVITY: Instructional Materials
Mass Media

PRIMARY POPULATION: Adult Continuing Education
General Public

FUNDING: Government of Ontario and educational foundations

SUMMARY: The Futures Project, to extend over two years, is engaged in the "development of a television series, along with appropriate teaching aids and supplementary materials, dealing with the concept of "alternative futures" and ways of generating both more alternatives and programs for the realization of desirable futures and the avoidance of undesirable ones (as defined by the viewer/student)."

To help assure the pertinence of the series to local situations, "futurists" and educators are being solicited for their ideas and involvement, and students enrolled in institutions willing to give credit for work on the series are being asked to participate. It is hoped that those involved in its production also will be instrumental in introducing the series into their local situation.

NAME: William I. Davisson

POSITION: Professor of Economics

INSTITUTION: University of Notre Dame
Notre Dame, Indiana 46556
Phone: (215) 283-7458

PRIMARY DISCIPLINE: Economics

ACTIVITY: Theory or Model Development
Research Methodology
Data Collection and Analysis
Instruction

PRIMARY POPULATION: Undergraduate

SUMMARY: Dr. Davisson, with Dr. John Uhran of the Electrical Entineering department, developed an undergraduate, upper-level interdisciplinary course on Simulation of Socio-Economic Systems. The course was first offered spring term, 1973-74, and involved a pilot group of seniors from the economics and engineering departments.

The primary texts for the course were D.H. Meadows, et al., Limits to Growth and The Dynamics of Growth in a Finite World, and Dynamo II, Users Manual (A.Pugh). After a four-week introduction to basic concepts and methods, small interdisciplinary teams formed to study and model specific problems in socio-economic systems. The goals were (1) to familiarize the student with a dynamic simulation language; (2) to familiarize the the student with one example simulation of a real-world problem; (3) to direct the student into simulation and modeling of other socio-economic problems; (4) to indicate strengths and weaknesses of specific models where all aspects of the model, including assumptions, must be quantified; (5) to encourage the investigation

and relevance of policy recommendations of real-world problems and their counterparts in simulation models.

"In conclusion, it might be said that this course provides a vehicle for engineers and non-engineers to talk on a common ground. Indeed in this we were very successful. Finally, it is worth noting that this course does not emphasize engineering, simulation or computers, but brings together common tools to solve complex, real-world problems."

NAME: Stuart C. Dodd

POSITION: Emeritus Professor of Sociology

INSTITUTION: University of Washington
Seattle, WA 98195
Phone: (206) 543-5024

PRIMARY DISCIPLINE: Sociology and Anthropology
Cosmology

ACTIVITY: Theory or Model Development
Publication

PRIMARY POPULATION: Graduate and Professional

SUMMARY: Professor Dodd is developing and testing mathematical models for the cosmos "when defined as the universal set ($=U^{O}=1$) of all things namable." His work is intended to develop an integrated world view that may ultimately reach the public at large.

In June, 1974, Professor Dodd helped organize a professional association of cosmology- or meta-modellers. Dr. Dodd gives two or three papers at conferences annually, and he is planning a monograph on his work in cosmos modelling. He is now under contract with Gordon and Beach to republish from his research career 150 articles in four volumes.

NAME: Duane S. Elgin

POSITION: Policy Research Analyst

INSTITUTION: Stanford Research Institute
333 Ravenswood Avenue
Building 203-B
Menlo Park, CA 94025
Phone: (415) 326-6200 Ext.4702

PRIMARY DISCIPLINE:
Communications and Linguistics
Ecological Science
Economics
Philosophy and Religion
Political Science and Government
Psychology and Psychiatry
Sociology and Anthropology

ACTIVITY:
Theory or Model Development
Research Methodology
Data Collection and Analysis
Research Administration
Proposal Writing/ Grantsmanship
Alternative Life Style
Publication

PRIMARY POPULATION:
General Public
Technical/Specialist Public

FUNDING: Numerous contracts with government and foundations

SUMMARY:

Dr. Elgin has listed three primary goals for his Institute activities. These are to develop (1) a humanistic social transformation, (2) an ecological ethic, and (3) a self-realization ethic.

Policy research is contracted with professional leadership in government, business and foundations. Reports and articles are also distributed to active researchers with similar concerns.

Reports in the area of education include "Alternative Futures and Educational Policy," a 40-page memorandum prepared for the U.S. Office of Education in 1970; and "The Potential Impact of a

National Population Distribution Policy upon Education," by Dr. Elgin, October 1972.

Dr. Elgin has also written a critique of industrial society titled, "Economic Man: Servant to Industrial Metaphors."

NAME: Robin Elliott

POSITION: Director, Information and Education

INSTITUTION: Planned Parenthood Federation of America
810 Seventh Avenue (6th Floor)
New York City, N.Y. 10019
Phone: (212) 541-7800

PRIMARY DISCIPLINE: Health/Medical Sciences

ACTIVITY: Data Collection and Analysis
Publication
Mass Media
Public Education
Medical Family Planning Service

PRIMARY POPULATION: General Public
Key health, educational, government institutions, public and private

FUNDING: Private contributions; foundation grants; government grants and contracts

SUMMARY:

The Federation works "to bring about a situation in which all individuals and couples have the ability and means to regulate their own fertility according to personal choice."

The Federation focuses primarily on low-income persons and youth, as those in greatest need, and the institutions and agencies "which are in a position to advance the interests" of the young and the poor.

The Federation produces books and articles, bibliographies, handouts, and audi-visual materials. It conducts research, analysis and evaluation of specific needs and services, and it models medical and educational services at the local level. Its main activities include:

--managing programs in schools, community agencies, and mass media in 250 communities in the U.S.;

--serving more than 800,000 individuals with family planning education and medical service;

--providing information service to and from key community agencies, including all levels of government;

--analyzing and publishing studies of needs for family planning and abortion services.

NAME: Mary English

POSITION: Planner

INSTITUTION: Massachusetts Department of Natural Resources
100 Cambridge Street, Floor 19
Boston, MA 02202
Phone: (617) 727-3163

PRIMARY DISCIPLINE: Ecology/Environmental Science
Recreation

ACTIVITY: Governance
Recreation

PRIMARY POPULATION: General Public

FUNDING: Mass. General Fund (from state taxes)
Special, use-specific funds (from certain excise taxes and licensing fees)

SUMMARY: The Department of Natural Resources seeks, through environmental regulation and management, and through acquisitions of parks, forests, and other selected valuable resource and recreational sites, to protect the natural resources of the Commonwealth of Massachusetts and to improve the recreational opportunities available to its people.

NAME: John C. Esty, Jr.

POSITION: Program Associate for Boston Area and Education

INSTITUTION: Rockefeller Brothers Fund
24 Walden Street
Concord, MA 01742

PRIMARY DISCIPLINE: Ecological Science
Education: Primary and Secondary

ACTIVITY: Proposal Writing/Grantsmanship
Instructional Materials
Consulting

PRIMARY POPULATION: Primary or Secondary School
Graduate and Professional

FUNDING: Rockefeller Brothers Fund
Rockefeller Family Fund

SUMMARY: Dr. Esty makes grant decisions. He advises in program development and is concerned that education administrators, institutions and students be alerted to the problems of the environment.

NAME: Jacqueline M. Falk

POSITION: Acting Chairman and Assistant Professor

INSTITUTION: University of Wisconsin - Green Bay
College of Human Biology
Growth and Development Concentration
Green Bay, WI54302
Phone: (414)465-2366

PRIMARY DISCIPLINE: Education: Postsecondary
Health/Medical Sciences
Sociology and Anthropology
Gerontology

ACTIVITY: Publication
Instruction

PRIMARY POPULATION: Undergraduate

FUNDING: State of Wisconsin

SUMMARY: Professor Falk's classes and published articles are designed to increase understanding of the problems of the aged in the U.S. The courses are interdisciplinary and serve undergraduate prospective nurses, school teachers and social workers.

Professor Falk plans a course dealing with support systems for the elderly, looking in particular at northeastern Wisconsin where large numbers of rural elderly live in isolated areas.

NAMES: F. Robert Gartner

POSITION: Associate Professor of Range Ecology

INSTITUTION: South Dakota State University
Agricultural Research and Extension Center
801 San Francisco Street
Rapid City, SD 57701

Phone: (605) 394-2237

PRIMARY DISCIPLINE: Agriculture
Ecology/Environmental Science

ACTIVITY: Data Collection and Analysis
Research Administration
Proposal Writing/Grantsmanship
Publication
Instruction

PRIMARY POPULATION: Undergraduate
Adult Continuing Education
General Public
Technical/Specialist Public

FUNDING: Federal, State and Agency Grants

SUMMARY: Professor Gartner is developing methods to be used by game and land managers and livestock producers to improve rangeland productivity. Much of his effort also is concerned with introducing managers and producers to existing methods through talks, demonstrations and public meetings. Dr. Gartner hopes to increase youth involvement in range management by means of programs in the public schools and via extracurricular events such as fairs and contests.

Further funding through grant agencies and the means for adding graduate research assistants to the project are being explored.

NAME: Richard I. Gerson

POSITION: Project Officer

INSTITUTION: National Science Foundation
Experimental R&D Incentives Program
1800 G Street, N.W.
Washington, D.C. 20550
Phone: (202) 632-5550

PRIMARY DISCIPLINE: Business and Management
Political Science and Government

ACTIVITY:

Research Methodology	Consulting
Data Collection and Analysis	Alternative Life Style
Research Administration	Governance
Proposal Writing/Grantsmanship	Recreation
Publication	Arts
Mass Media	Lobbying

PRIMARY POPULATION: Graduate and Professional
Technical/Specialist Public

FUNDING: Federal Program Funds

SUMMARY: The Experimental Research and Development Incentives Program fosters innovative policies and tests them for their actual differential effects. University and industrial research and development staff and government officials at all levels concerned with innovation are involved, with special effort to bring industries, cities and universities into cooperation. Federal financial policy incentives in particular are an expected Program area.

NAME: Jerry Glenn

POSITION: Syncon Coordinator and Director, New Worlds Training and Education Center

INSTITUTION: The Committee For The Future, Inc.,
2325 Porter Street, N.W.
Washington, D.C. 20008
Phone (202) 966-8776

PRIMARY DISCIPLINE: Comprehensive Future Global Planning

ACTIVITY:

Theory or Model Development	Instruction
Data Collection and Analysis	Instructional Materials
Research Administration	Mass Media
Proposal Writing/Grantsmanship	Consulting
Publication	

PRIMARY POPULATION: General Public

FUNDING: Mix of private donations, corporations and U.S. Government (F.E.A., N.S.F., and A.E.C.)

SUMMARY: The Committee for the Future, Inc., involves as large a cross-section of the public as possible in generating positive images of the future and facilitating their actualization.

Eighteen syncons--"public think-tanks"--have been held and televised, and materials produced by the Committee include books and articles, resource handouts, audio-visual materials, computer programs and simulations, hardware and workshop designs. A global syncon is in ovo.

NAME: Roderic Gorney

POSITION: Associate Adjunct Professor; Director, Program on Psychosocial Adaptation and the Future

INSTITUTION: University of California - Los Angeles
Department of Psychiatry
760 Westwood Plaza
Los Angeles, CA 90024
Phone: (213) 825-0463

PRIMARY DISCIPLINE: Education: Postsecondary
Health/Medical Sciences
Political Science and Government

ACTIVITY: Data Collection and Analysis
Publication
Mass Media
Arts

PRIMARY POPULATION: Graduate and Professional
General Public
Technical/Specialist Public

FUNDING: Lilly Endowment, Indianapolis, Indiana

SUMMARY: The Program on Psychosocial Adaptation and the Future is researching the effects of television entertainment on adult attitudes, values, and behavior, and the effects of different styles of child-raising on adult levels of achievement, aggression, and mental illness.

The study of child-raising involves a comparative study of 60 cultures. The television research is gathering information from 300 volunteer subjects in the Los Angeles area, and the results are expected to be analyzed and published by mid-1975, with "an overall 'effect index' for television programming use" as an eventual goal.

NAME: Richard S. Greeley

POSITION: Associate Technical Director

INSTITUTION: The Mitre Corporation
Westgate Research Park
McLean, VA 22101
Phone: (703) 790-6771

PRIMARY DISCIPLINE:
- Biology
- Business and Management
- Chemistry and Physics
- Communications and Linguistics
- Earth Sciences
- Ecology/Environmental Science
- Engineering and Technology
- Mathematics and Computer Science
- Economics

ACTIVITY:
- Theory or Model Development
- Research Methodology
- Data Collection and Analysis
- Research Administration
- Proposal Writing/Grantsmanship
- Publication

PRIMARY POPULATION:
- Graduate and Professional
- Government Officials

FUNDING: Primarily (99%) government agencies

SUMMARY:

The Mitre Corporation is a consulting firm to government agencies, at present primarily the Federal Energy Administration, the Environmental Protection Agency, the Office of Cost Research, the Bureau of Mines, the National Science Foundation, the National Aeronautics and Space Administration, the Army Corps of Engineers, the Geological Survey, and the Bureau of Land Management.

The Mitre Corporation is primarily involved in systems engineering, but it also takes on the roles of research and development planning; program management, testing and evaluation; cost/benefit analysis; technology assessment; technology transfer; and systems

research. The corporation expects a 5% per year company growth rate for several years in the fields of energy and the environment.

Richard S. Greeley summarizes the corporation's approach as follows: "We propose a systems approach to most problems, based on extensive expertise of our multi-disciplinary staff. Our first product on most tasks is a management plan for the task and a thoroughly researched and analyzed discussion of the central problem to be solved."

NAME: Edward J. Green

POSITION: President

INSTITUTION: Planning Dynamics, Incorporated
850 Ridge Avenue
Pittsburgh, PA 15212

PRIMARY DISCIPLINE:
Business and Management
Communications and Linguistics
Education: Postsecondary
Health/Medical Sciences

ACTIVITY:
Data Collection and Analysis
Instruction
Instructional Materials
Consulting
Governance
Seminars
Workshops
Conferences

PRIMARY POPULATION:
Adult Continuing Education
General Public
Hospitals
Public Utilities
Government Agencies
Colleges and Universities
Community Colleges

FUNDING:
Foundation Grants
Government contracts
Client Retainers
Lecture fees

SUMMARY:

Working primarily with colleges and universities, health care services, government agencies and public utilities, Planning Dynamics, Inc., helps an organization "modify its mission in light of changing expectations, threats, requirements, opportunities, capabilities, resources . . . and accomplish optimum results regardless of what happens."

Acceptance and support by key people involved or affected in the organizational changes are cultivated in the counseling process, which has several dimensions: (1) Clarification of questions of scope, purpose and mission; (2) Identification and evaluation of the environment and its potentials; (3) Development of an internally consistent model of probable developments; (4) Determination

of a strategy to accomplish the desired rate and type of change; (5) Coordination of strategic, operational and logistic planning.

In addition to the expanding needs of educational, health and governmental organizations, Planning Dynamics is working to respond more effectively to the requirements of international organizations to cope with complex, rapidly changing and unpredictable environments. It has produced course syllabi, programmed learning courses, books, articles and handouts, audio-visual aids, workshop designs, films, and cassettes as facilitating materials.

NAME: Elinor Greenberg

POSITION: Director, University Without Walls, And Other Special Programs

INSTITUTION: University Without Walls/Loretto Heights College
3001 South Federal Boulevard
Denver, CO 80236
Phone: (303) 936-8441 Ext.221

PRIMARY DISCIPLINE:

- Aesthetics/Applied Arts
- Biology
- Business and Management
- Communications and Linguistics
- Ecology/Environmental Science
- Economics
- Education: Primary and Secondary
- Education: Postsecondary
- Health/Medical Sciences
- History and Geography
- Law
- Philosophy and Religion
- Political Science and Government
- Psychology and Psychiatry
- Recreation and Physical Education
- Sociology and Anthropology

ACTIVITY:

- Theory or Model Development
- Research Methodology
- Data Collection and Analysis
- Research Administration
- Proposal Writing/Grantsmanship
- Publication
- Instruction
- Instructional Materials
- Mass Media
- Consulting
- Alternative Life Style
- Governance
- Recreation
- Arts

PRIMARY POPULATION:

- Undergraduate
- Adult Continuing Education
- Graduate/Professional
- General Public

FUNDING:

- Student Tuition
- Office of Education
- Ford Foundation
- Title I HEA '65
- U.S. Public Health Service
- Teacher Corps
- Other

SUMMARY: The University Without Walls/Loretto Heights College serves to provide an alternative, individually designed, undergraduate degree program utilizing a mixture of learning resources. The program is intended to conform to anyone with special needs, including ethnic minorities, corrections, students-at-a-distance, and adults seeking continuing education.

NAME: Paul J. Grogan

POSITION: Professor of Engineering

INSTITUTION: The University of Wisconsin
Room 613, University Extension
432 North Lake Street
Madison, WI 53705

Phone: (608) 262-2101

PRIMARY DISCIPLINE: Engineering and Technology

ACTIVITY: Data Collection and Analysis
Publication
Instruction
Consulting

PRIMARY POPULATION: Adult Continuing Education
Graduate and Professional
Technical/Specialist

SUMMARY:

Professor Grogan seeks to help professional engineers and community leadership keep pace with new and changing technology and to create awareness of the ways in which the future is not a mere extension of the past.

Professor Grogan works through publication, conferences, workshops, seminars and in-service teacher and "extension agent" training, and as organizational possibilities he advocates, in these activities, the concepts of regional planning, with joint sponsorship, shared syllabi and staffs, and rotation of meeting sites.

NAME: Edward T. Hall

POSITION: Professor of Anthropology

INSTITUTION: Northwestern University
Evanston, IL 60201

(On leave, 1974-75:
P.O. Box 5278
Santa Fe, NM 87501
Phone: (505) 982-3203)

PRIMARY DISCIPLINE: Business and Management
Anthropology

ACTIVITY: Theory or Model Development
Research Methodology
Publication
Consulting

PRIMARY POPULATION: Undergraduate
Graduate and Professional
General Public

SUMMARY: Dr. Hall's publications relat ed to architecture and planning include:

(1) "High Rise Living: Can the Same Design Serve Both Young and Old?" (with Gerda Wekerle). Ekistics, Vol. 33, No. 196, March 1972.

(2) "Proxemics and Design." Design & Environment, Vol. 2, No. 4, Winter 1972. Reprinted as "Communication and Design." Man Environment Systems, Vol. 2, No. 2, March 1972.

(3) "Environmental Communication." Behavior and Environment: The Use of Space by Animals and Men. Edited by Aristide H. Esser. New York: Plenum Press, 1971.

His work is in the application of proxemic research to planning and architecture.

NAME: Niles Hansen

POSITION: Professor of Economics
Director, Center for Economic Development

INSTITUTION: University of Texas
BEB 400
Austin, TX 78712

PRIMARY DISCIPLINE: Ecology/Environmental Science
Economics

ACTIVITY: Theory or Model Development
Data Collection and Analysis
Research Administration
Proposal Writing/Grantsmanship
Publication
Instruction
Consulting

PRIMARY POPULATION: Graduate and Professional
Technical/Specialist Public

SUMMARY:

During 1974 Professor Hansen was invited to give papers at Harvard University; the Research Triangle Institute, Raleigh, North Carolina; and to the American Society of Planning Officials, Chicago. He has been consultant to several studies, including: (1) The Social Science Research Council, Western Europe Fellowship Programs, 1973-74; (2) The National Science Foundation, Office of Polar Projects, 1973-74; (3) The Southern Regional Council, 1974; (4) The Rand Corporation, 1974; (5) The Nova Scotia Development Project, Halifax, 1974.

Dr. Hansen has been project director of numerous study grants. Those since 1973 include:

--Income Change, Poverty Reduction and Labor Mobility in Nonmetropolitan Areas, Office of Economic Opportunity, 1973 (Funding level: $77,481)

--Evaluation of Policy Related Research: Goals and Quality of Economic Development, National Science Foundation, 1973 (Funding level: $93,600)

--Cooperative Dispersed Urban Area Manpower Planning for Nonmetropolitan Areas, U.S. Department of Labor, 1974 (Funding level: $81,369)

He is a member of the board of editors of several scholarly journals and a member of the National Growth Study Committee, Academy for Contemporary Problems, and has published widely.

For the nature of Professor Hansen's work as director of the Center for Economic Development, see the next entry.

NAME: Niles Hansen

POSITION: Director

INSTITUTION: Center for Economic Development
University of Texas
BEB 400
Austin, TX 78712

PRIMARY DISCIPLINE: Ecological Science
Economics

ACTIVITY:

Theory or Model Development	Publication
Data Collection and Analysis	Instruction
Research Administration	Consulting
Proposal Writing/Grantsmanship	

PRIMARY POPULATION: Graduate and Professional
Technical/Specialist

FUNDING: Grants and contracts from sources outside the University of Texas. Since 1969 major support has come from the Economic Development Administration, U.S. Department of Commerce; the Office of Economic Opportunity; the U.S. Department of Labor; and the National Science Foundation.

SUMMARY: "The Center for Economic Development is a research unit within the Department of Economics and the College of Social and Behavioral Sciences, University of Texas. The research is primarily oriented toward policy issues in spatial resource allocation. . . .Principal projects have included research on the role of growth centers in regional economic development; analysis of the role of multicounty planning efforts in the United States; studies of factors behind the reversal of population decline in selected nonmetropolitan regions of the nation; critical assessment of measures for controlling the growth and development of cities; and, in cooperation with the Center for Environmental Studies (London), a comparative study

of public policy and regional development in nine Western nations. The Center has also collaborated with other federal agencies, state agencies, and Presidential commissions."

A few examples of discussion papers given at the Center:

--"Loan Practices of Commercial Banks and Economic Agglomeration," Jack Griggs and William Petty;

--"Mathematical Models for Regional Planning," David Kendrick;

--"Factors Determining the Location of Industrial Activity," Niles Hansen;

--"The Delineation of a National System of Planning Regions on the Basis of Urban Spheres of Influence," David L. Huff.

NAME: Walter E. Hecox

POSITION: Assistant Professor

INSTITUTION: Colorado College
Economics Department
Colorado Springs, CO 80903
Phone: (303) 473-2233, Ext.314

PRIMARY DISCIPLINE: Economics

ACTIVITY: Undergraduate
Adult Continuing Education

PRIMARY POPULATION: Instruction
Instructional Materials

FUNDING: Colorado College Faculty Research Grant

SUMMARY: Dr. Hecox is developing the curriculum and materials for an undergraduate course in "Systems Approaches to Alternative World Futures" to be taught, beginning in January, 1975, at Colorado College. This material he intends to publish as articles and perhaps as a book.

NAME: Nicolas D. Hetzer

POSITION: President

INSTITUTION: International Ecosystems University
Forum International, Inc.
300 Eshleman Hall
University of California
Berkeley, CA 94720

Phone: (415) 642-1954/5387
843-8294
841-5105

PRIMARY DISCIPLINE: Ecology/Environmental Science
Education: Postsecondary
Sociology and Anthropology

ACTIVITY: Research Methodology
Publication
Instruction
Instructional Materials
Consulting

PRIMARY POPULATION: Primary or Secondary School
Undergraduate
Graduate and Professional
General Public

FUNDING: Private
Self-generated
Foundation, Corporation
Government

SUMMARY: Working with present and potential decision makers at the international and national levels of government, business, labor and education, with teachers and future teachers, and with students at all levels, the organization is pursuing the goal of "spreading of ecosystemic and transdisciplinary approaches to education, research and public service through the establishment of the 'International Ecosystems University' as the basis of a global education/innovation system.

From 1965 to 1972 concepts, methodology and support for the project were developed in small workshops, seminars, conferences and publications, including a magazine, inside and outside of the U.S., with traditional disciplinary institutions and with potential faculty and students. Beginning in 1973 a three-year implementation program commenced and major programs at the graduate, undergraduate and professional levels were consolidated into the International University proper.

The mission of the University is the design of a 'World Optimization Plan' based on 'functional ecosystems units' and "elaborated by the various units of the International Ecosystems University in collaboration with affiliated units and the 'new professionals' trained in them."

NAME: B. Ray Horn

POSITION: Lecturer in Conservation--Extension

INSTITUTION:
Environmental Communication and Education
School of Natural Resources
University of Michigan
Ann Arbor, MI 48104
Phone: (313) 764-1410

PRIMARY DISCIPLINE:
Communications and Linguistics
Ecological Science
Education: Primary and Secondary
Education: Postsecondary
Political Science and Government

ACTIVITY:
Theory or Model Development
Research Administration
Proposal Writing/Grantsmanship
Publication
Instruction
Instructional Materials
Mass Media
Consulting
Alternative Life Style

PRIMARY POPULATION:
Primary or Secondary School
Undergraduate
Adult Continuing Education
Graduate and Professional
Technical/Specialist Public

FUNDING:
The University of Michigan
United States Office of Education
Private Sources

SUMMARY:

Dr. Horn is an authority on state planning for environmental communication and education programs. He was the principal author of Michigan's statewide master plan for all environmental communication, education, and information programs (1973), and he has a book forthcoming on communication strategies for environmental communication and education.

Dr. Horn's work is cross-culturally oriented and focuses on the diffusion of innovations which are pro-environmental in nature. Graduate-level students and practicing professionals are his principle immediate targets.

NAME: Sydney Howe

POSITION: Executive Director

INSTITUTION: Center For Growth Alternatives
1785 Massachusetts Avenue, N.W.
Washington, D.C. 20036
Phone: (202) 387-6700

PRIMARY DISCIPLINE:

- Agriculture
- Biology
- Business and Management
- Communications and Linguistics
- Earth Sciences
- Ecology/Environmental Science
- Economics
- Education: Primary and Secondary
- Sociology and Anthropology
- Education: Postsecondary
- Engineering and Technology
- Health/Medical Sciences
- Philosophy and Religion
- Political Science and Government
- Psychology and Psychiatry
- Recreation and Physcial Education

ACTIVITY:

- Proposal Writing/Grantsmanship
- Publication
- Mass Media
- Consulting
- Alternative Life Style
- Governance

PRIMARY POPULATION:

- General Public
- Technical/Specialist Public
- Decision-makers

SUMMARY:

"CGA has been established as a service and information linkage among citizen leaders, researchers and decision-makers in both the public and private sectors. In order to increase the efficiency and visibility of many persons and groups facing growth issues, the Center is beginning to:

--Collect, analyse and disseminate information on personal, social, economic, and governmental practices that influence population and consumption growth. . .

--Convene varied expertise and viewpoints to define and advance positive growth alternatives having sound social, economic and ecological foundations.

--Elevate the national dialogue on growth and expand participation in it, through public affairs and training functions that complement and amplify the work of others."

The Center is giving primary attention to the application of known local and regional growth alternatives. Its first efforts focus on housing, employment, transportation, environmental protection and population concerns; energy alternatives; and food alternatives. A guide to the regulation of subdivision plans, commercial and industrial proposals, utility sitings, and transit and tax issues is in preparation. Its aim is "to bring wide public interest to bear upon ad hoc confrontations and to help community leaders integrate specific issues into comprehensive--and often regional--growth management. Also, a report on living with less energy is being produced as an issue of the quarterly Equilibrium, published by CGA as a journal of growth alternatives.

As funds permit, the Center plans work on gains for the economically disadvantaged; co-sponsorship of citizen conferences; and an information service on innovative adjustments to energy shortage.

NAME: M. King Hubbert

POSITION: Research Geomorphologist

INSTITUTION: U.S. Geological Survey
National Center, Mail Stop 922
Reston, VA 22092
Phone: (703) 860-6426

PRIMARY DISCIPLINE:
Earth Sciences
Ecology/Enviromental Science
Education: Postsecondary
Engineering and Technology

ACTIVITY:
Data Collection and Analysis
Publication
Instruction

PRIMARY POPULATION:
Graduate and Professional
General Public
Technical/Specialist Public

FUNDING: U.S. Geological Survey

SUMMARY: Dr. Hubbert works to acquaint government officials, universities, professions, and the general educated public with the present status and future constraints in the evolution of human society. From analysis of data on energy, material and biological resources, Dr. Hubbert primarily prepares technical papers, books and gives invited papers. Dr. Hubbert has also given testimony before Congressional committees.

NAME: Elizabeth Hunter

POSITION: Professor of Education, Department of Curriculum and Teaching

INSTITUTION: Hunter College
City University of New York
Box 803
695 Park Avenue
New York, N.Y. 10021

PRIMARY DISCIPLINE: Education: Primary and Secondary
Education: Postsecondary

ACTIVITY: Publication
Instruction
Instructional Materials
Consulting

PRIMARY POPULATION: Undergraduate
Graduate and Professional

SUMMARY: At Hunter College Professor Hunter teaches future teachers and present teachers of children. In addition she does a variety of consulting and is particularly interested in working with college faculties as they seek to improve instruction.

Her primary goal in classes, workshops and consulting is to help people improve their work with children or adults who are their 'clients'. She concentrates on helping people become "more accepting and acknowledging in the affective domain, to become more sophisticated in their use of affect," and she emphasizes activities and experiences for deepening cognitive learning.

Professor Hunter remarks of her teaching, "In all of my work I try to model what I am teaching: I use activities and experiences constantly, I use small groups a great deal, and I try, successfully, I believe, to model helpful and encouraging behavior."

Professor Hunter is the author of the books, The Cooperating Teacher at Work, published by Teachers College Press; Student Teaching, Cases and Comments, and Improving Teaching: Analysing Verbal Interaction in the Classroom (these two co-authored with Edmund Amidon); and Encounter in the Classroom: New Ways of Teaching, all published by Holt, Rinehart and Winston. Articles include: "Improving the Language Skills of Deprived Teachers" in Elementary Education; "Student Teaching as Preparation for Work in the Inner City Schools" in Educational Comment; "Fostering Creative Expression" in Childhood Education; and "Direct Experience in Teacher Education: Innovation and Experimentation" in The Journal of Teacher Education.

NAME: Richard T. Ingram

POSITION: Associate Director

INSTITUTION: Association of Governing Boards of Universities and Colleges
One Dupont Circle
Suite 720
Washington, D.C. 20036
Phone: (202) 296-8400

PRIMARY DISCIPLINE: Education: Postsecondary

ACTIVITY: Data Collection and Analysis
Proposal Writing/Grantsmanship
Governance

PRIMARY POPULATION: General Public
Trustees

FUNDING: Three-fourths of the Association's operating expenses are provided by annual membership dues, the remainder comes from foundations, corporations and individual gifts.

SUMMARY: "The Association of Governing Boards of Universities and Colleges (AGB) exists to strengthen higher education by strengthening its lay leadership. It is the only national organization concerned primarily with the problems and responsibilities of trusteeship in all sectors of higher education, and with the relationships of trustees and regents to the president, the faculty and the student body.

"Of particular value to the trustee or regent are the programs of the Association's National Conference on Trusteeship and other conferences, seminars and symposia planned to meet regional and special needs."

Recent topics of the AGB programs have included:

-- Financing Higher Education
-- Resources and Reform
-- Tenure and Teacher Effectiveness

-- The Trustee and Emergent Social Pressures

-- Vitality Without Expansion: A Question of Priorities

AGB publishes a journal, ABG Reports, "featuring commentary, reports of conferences, and other materials of special interest to trustees." Articles which have appeared in the journal include:

-- "The Limits of Accountability," by Stephen K. Bailey

-- "The Impact of Collective Bargaining on University Governance," by William B. Boyd

-- "Colleges and Universities as Agents of Social Change," by Algo D. Henderson

The AGB is especially interested in more effectively reaching governing boards at their institutions through individual consultation and special presentations, and it is working for a greater emphasis on the training of new trustees and board chairmen.

NAME: Donald N. Johnson

POSITION: Associate Director

INSTITUTION: Bureau of Governmental Research and Service
University of Oregon
P.O. Box 3177
Eugene, OR 97403
Phone: (503) 686-5232

PRIMARY DISCIPLINE:

- Business and Management
- Economics
- Education: Postsecondary
- Engineering and Technology
- Law
- Mathematics and Computer Science
- Political Science and Government
- Governmental Research
- Urban and Regional Planning
- Public Finance
- Public Administration

ACTIVITY:

- Research Methodology
- Data Collection and Analysis
- Research Administration
- Proposal Writing/Grantsmanship
- Publication
- Instruction
- Instructional Materials
- Consulting

PRIMARY POPULATION:

- Graduate and Professional
- Public Officials

FUNDING: Currently about three-fifths from the University of Oregon; the rest from a variety of governmental sources (federal-state-local)

SUMMARY: The basic goal of the Bureau of Governmental Research and Service is to improve public policy decision-making of state and local government in Oregon. It applies its resources (including course syllabi, books, articles, handouts, computer programs, and workshops) to areas of basic public policy from a multi-disciplinary perspective. Its activities emphasize development of research methodology, data collection and analysis, and instruction, at the university and through institutes, conferences and consultation. In particular, the Bureau has had continuing involvement with urban growth and land use problems and has prepared research and publications and taught courses in these areas.

NAME: Bengt Olof Karlsson

POSITION: Head of Long Term Analysis Division

INSTITUTION: Swedish Ministry of Finance, Economic Department
Postfack 103 10
Stockholm 2, Sweden
Phone: 08-763 10 00

PRIMARY DISCIPLINE: Business and Management
Economics

ACTIVITY: Theory or Model Development
Data Collection and Analysis
Research Administration

PRIMARY POPULATION: General Public
Government Officials

SUMMARY: "Medium-term planning in Sweden is determined by certain fundamental principles concerning the management of the economy and by the conditions under which economic policy operates. These are characterized by individual freedom and decentralized decision-making. Central planning tends to be of an indicative nature and as to operate under conditions of uncertainty."

"The main approach to achieve a desired development must be to use rather general policy measures in the fields of fiscal, monetary, trade and industrial policy in order to create or modify external conditions."

For medium-term planning, the analysis included in the surveys "concentrated on general macroeconomic aggregates--consumption, investments, foreign trade, production, employment, etc. The analysis by industrial sectors deals with broad groupings--agriculture, forestry, industry, building and construction, communications, trade, etc."

"An econometric model for the total Swedish economy was used for the calculations of economic development,

1970-1975, in the 1970 Survey. This model was extended and used also in the revision of the Survey covering the period up to 1977.

"The model is not intended to inform of cyclical changes in the economy. The technique of analysis is one of comparative statics, i.e., the solution of the model for one specific year is quite independent of the solution of the preceding year."

"The Planning and preparation for the 1975 Survey is well under way. Basically it will follow suit of earlier exercises but development work is being pursued in two different directions.

"The first direction is a broadening and deepening of the traditional contact spectrum with other planners, research institutions and individual researchers."

"The second direction is an extension of the econometric model work. Apart from improving on the present model, attempts are being made of constructing sub-models for various areas that in different ways will be linked to the main model. This work is as yet only exploratory." The areas being explored include the savings and credit market, regional development and its national consequences, labor supply, and private consumption.

In November of 1973 a Royal Commission on budgetary matters outlined a proposal to thoroughly reform the central government budgetary system. Included was the institution of long-range perspective studies with time horizons sufficiently long, 10-20 years, to allow for radical changes in the activities of economic sectors.

Study and planning in the fields of land use and energy requirements are being expanded, and a special secretariat for futuristic studies has recently been established.

NAME: Halvor J. Kolshus

POSITION: Associate Professor in Modernization Processes and Economics
Associate Dean of the Colleges

INSTITUTION: University of Wisconsin - Green Bay
Green Bay, WI 54302
Phone: (414) 465-2171

PRIMARY DISCIPLINE:
Agriculture
Business and Management
Economics
Education: Postsecondary
Sociology and Anthropology

ACTIVITY:

Theory or Model Development	Publication
Data Collection and Analysis	Instruction
Research Administration	Instructional Materials
Proposal Writing/Grantsmanship	Consulting

PRIMARY POPULATION:
Undergraduate
Adult Continuing Education
Graduate and Professional
General Public

SUMMARY:

Professor Kolshus wishes "to make understood that growth is not inevitable, to communicate that mankind has a choice in the making of tomorrow, and that we have a responsibility to actively participate and create our environment."

Professor Kolshus develops specific courses on alternative futures to encourage students to think in terms of social engineering rather than passive accomodation.

NAME: David Kresge

POSITION: Program Director, Man in the Arctic Program

INSTITUTION: Institute of Social, Economic Government Research
University of Alaska
Fairbanks, AK 99701
Phone: (907) 479-7437

PRIMARY DISCIPLINE: Economics

ACTIVITY: Theory or Model Development
Data Collection and Analysis
Research Administration
Proposal Writing/Grantsmanship
Publication

PRIMARY POPULATION: Graduate and Professional
General Public
Technical/Specialist Public

FUNDING: National Science Foundation, Office of
Polar Programs

SUMMARY: The "Man in the Arctic" program is providing policy-choice analysis for public policymakers--the state administration and legislature, federal land managers, state and federal planning groups in Alaska, and professional consultants--in the areas of Alaskan land, resources, fiscal policy and environment use.

Critical present and near-future decision areas are identified in the development of basic models of Alaskan economy and demography. Divergent possible choices in the various policy areas are selected and the consequences of these policies traced in terms of population change, employment, personal income, environmental impact, and quality of life. In the area of environmental impact and demography, more complete basic data are sought, and for questions of quality of life, the program is concerned that better theories and techniques for research be developed.

NAME: Ervin Laszlo

POSITION: Professor

INSTITUTION: SUNY College at Geneseo
Geneseo, N.Y. 14454
Phone: (716) 245-5232

PRIMARY DISCIPLINE: Education: Postsecondary
Philosophy and Religion

ACTIVITY: Theory or Model Development
Publication
Instruction

PRIMARY POPULATION: Undergraduate
Graduate and Professional
General Public

SUMMARY: Among students and the general public, through articles, books and lectures, Professor Laszlo seeks to generate a consciousness keyed to alternative futures and systems studies. He also intends to establish a research institute in systems studies.

Strategy for the Future is a recent book by Dr. Laszlo.

NAME: Robert Linden

POSITION: Research Aide

INSTITUTION: Cornell University
Program on Science, Technology and Society
632 Clark Hall
Ithaca, N.Y. 14853

PRIMARY DISCIPLINE:

- Agriculture
- Biology
- Business and Management
- Chemistry and Physics
- Earth Sciences
- Ecology/Environmental Science
- Economics
- Education: Postsecondary
- Engineering and Technology
- Health/Medical Sciences
- History and Geography
- Law
- Mathematics and Computer Science
- Philosophy
- Political Science and Government
- Sociology and Anthropology

ACTIVITY:

- Theory or Model Development
- Research Methodology
- Data Collection and Analysis
- Research Administration
- Proposal Writing/Grantsmanship
- Publication
- Instruction
- Instructional Materials

PRIMARY POPULATION:

- Undergraduate
- Graduate and Professional
- Technical/Specialist Public

FUNDING: Private and Corporate Foundations, Governmental Funding Agencies and Cornell University

SUMMARY: "The Cornell University Program on Science, Technology, and Society (STS) was established in the summer of 1969 to stimulate interdisciplinary teaching and research on the interaction of science and technology with society. Initial funding for the project was provided by the National Science Foundation, with Cornell University contributing a portion of the faculty salaries. In November 1970 the Program was awarded a $300,000 three-year curriculum-innovation grant by the National Science Foundation; this money has been used to continue the development of courses and to provide speakers and workshops in response to continued student and faculty interest in the area.

"The emphasis throughout is on interdisciplinary approaches to problems, and to this end courses have been sponsored in various departments, colleges, and divisions on campus, including the physical, biological, and social sciences; the humanities; engineering; business and public administration; and law. STS involvement in a course may range from encouragement in the planning stages to co-sponsorship, or to direct responsibility by an STS faculty member under the auspices of a University department."

"The course may be initiated by STS or by a department, but in either case the ultimate goal is the same: the incorporation of successful interdisciplinary courses as regular offerings in established departments. The Program thus functions as a catalyst, and this role will be maintained; there are no long-range plans for turning the Program into a department."

Brochures on the program, its course listings and publications are available.

NAME: Martti Lindqvist

POSITION: Senior Research Assistant

INSTITUTION: Research Institute of the Lutheran Church
Satakunnankata 11 B 21
SF-33100 Tampere 10
Finland

Phone: Tampere 31212

PRIMARY DISCIPLINE: Philosophy and Religion
Sociology and Anthropology

ACTIVITY: Publication
Consulting

PRIMARY POPULATION: Graduate and Professional
General Public

FUNDING: Lutheran Church of Finland

SUMMARY: Dr. Lindqvist is working with theologians, church decision-makers and ecumenical staff, analyzing the ecumenical debate on economic growth and the image of man. He participated in the World Council of Churches' project on "The Future of Man and Society in a World of Science-Based Technology."

NAME: Juan A. Llado

POSITION: Executive Director
Dominican Republic Human Resources Study Project

INSTITUTION: Education Development Center, Inc.
55 Chapel Street
Newton, MA
Phone: (617) 969-7100

PRIMARY DISCIPLINE: Economics

ACTIVITY: Research Methodology

PRIMARY POPULATION: General Public

FUNDING: Interamerican Development Bank--a loan to the Government of the Dominican Republic

SUMMARY: Dr. Llado is studying and redefining priorities for educational development in the Dominican Republic. His current project involvement concerns the definition of areas of investment in education. This study will continue into a second phase after policies have been defined and will involve specific project identification.

NAME: Earle L. Lomon

POSITION: Education Development Center
55 Chapel Street
Newton, MA 02158
Phone: (617) 969-9620

PRIMARY DISCIPLINE: Education: Primary and Secondary

ACTIVITY:
Theory or Model Development
Data Collection and Analysis
Proposal Writing/Grantsmanship
Instruction
Instructional Materials
Consulting

PRIMARY POPULATION:
Primary or Secondary School
Adult Continuing Education

FUNDING: National Science Foundation

SUMMARY:

The EDC* is developing and fostering the widespread implementation of an elementary school program "which gives students an opportunity to work on solving real and practical problems in their school and community and in so doing to learn and practice skills and concepts from many disciplines as they are needed."

Students in grades 1-8 may participate in the program. Teachers and all levels of education administration and teacher preparation are being contacted to develop, test and institute the program, which completed will consist of "32 units based on real problems that exist in most schools and communities and related resource materials for teachers and students. Documentation of successful implementation strategies developed by local resource materials for use by other groups interested in implementing the program."

"Funding is expected to continue until 1978 by which time all 32 units will be developed and many more resource teams trained. A similar program for secondary school

students is being explored by a number of interested parties and a National Advisory Council on Interdisciplinary Education is being considered by a number of discipline-oriented education professional organizations."

*Note: This work by the EDC is outside the main thrust of this directory. However, because of the interdisciplinary nature of the EDC program, we have chosen to include a summary of the material they provided.

NAME: Richard C. Lonsdale

POSITION: Professor of Educational Administration and Higher Education

INSTITUTE: New York University
4 Washington Place, Rm. 277
New York, N.Y. 10003
Phone: (212) 598-2916

PRIMARY DISCIPLINE: Education: Postsecondary

ACTIVITY: Instruction
Governance

PRIMARY POPULATION: Graduate and Professional

SUMMARY: During the last two years, Professor Lonsdale has included material on "limits to growth" in classes and in special lectures and discussions with students. "Graduate students in education generally and more particularly in educational administration and higher education" are the main subjects of this exposure to limits to growth thinking and values.

NAME: Carlos Alberto Mallmann

POSITION: Executive President

INSTITUTION: Fundacion Bariloche
Casilla de Correo 138
San Carlos de Bariloche
Prov. de Rio Negro,
Argentina

Phone: 8017-8321-8322

PRIMARY DISCIPLINE: Physics
Philosophy
Psychology

ACTIVITY: Theory or Model Development
Research Administration
Alternative Life Style

PRIMARY POPULATION: Graduate and Professional

FUNDING: Fundacion Bariloche

SUMMARY: Dr. Mallmann is developing a theory of well-being or quality of life and the means to implement such a theory in society. An interdisciplinary group of twenty senior researchers with corresponding junior researchers and staff are engaged in the study. Partial results are being published for proposals and funding through government agencies.

NAME: Shelley M. Mark

POSITION: Director

INSTITUTION: Department of Planning and Economic Development
250 South King Street
Honolulu, Hawaii 96813

or

P.O. Box 2359
Honolulu, Hawaii 96804

PRIMARY DISCIPLINE:
Agriculture
Business and Management
Ecology/Environmental Science
Economics

ACTIVITY:
Theory or Model Development
Data Collection and Analysis
Research Administration
Publication
Governance

PRIMARY POPULATION:
General Public
Government Officials

FUNDING: State and Federal Monies

SUMMARY:

The Department of Planning and Economic Development is the chief agency in Hawaii involved in growth policy planning. As part of the General Plan Revision Program, under the overall direction of Dr. Shelley M. Mark, the agency has developed a state policy planning document, State of Hawaii Growth Policies Plan: 1974-1984. Dr. Bruce S. Pasch was technical manager for the document, and Dr. John C. Holmstrom of the Pacific Urban Studies and Planning Program, University of Hawaii, and Dr. Anthony J. Cantanese, Vice President of the American Institute of Planners, provided research assistance.

The growth policies plan "presents an analysis of alternative sets of State policies which can substantially

affect, within the next decade, the rates of expansion of Hawaii's population and economy. The Plan recommends policies for legislative and public consideration which call for moderation of growth rates for the capital Island of Oahu, and slight moderation of growth rates for the Neighbor Islands. These actions consider economic and social factors, with emphasis on population, agriculture, tourism, transportation, and housing. Actions for implementing the recommended policies are also presented."

NAME: Joan E. Martin

POSITION: Assistant Director for Education

INSTITUTE: Thorne Ecological Institute
2305 Canyon Boulevard
Boulder, CO 80303
Phone: (303) 443-7325

PRIMARY DISCIPLINE: Ecology/Environmental Science
Education: Primary and Secondary
Education: Postsecondary

ACTIVITY: Data Collection and Analysis
Instructional Materials
Consulting

PRIMARY POPULATION: Primary or Secondary School
Adult Continuing Education
Graduate and Professional
General Public
Decision-Makers

FUNDING: Outside Grants, Contractors or, Joint Sponsors,
Participant Fees

SUMMARY:

"To advance man's understanding and knowledge of both the science and the spirit of ecology so that he may successfully apply them to the problems and responsibilities of living on this planet," the Thorne Ecological Institute devises educational programs for adults and for children preschool-age through high school, contracts with government and industry for ecological research and organizes special seminars for corporate decision-makers, local problem-solvers, government employees and for the general public.

The Institute concentrates effort on conveying through education the importance of ecological values and principles and to interrelate applied ecology and education. To augment this educational effort, the Institute recently

added two new staff. The Institute strives as well through applied ecological research to make ecology a meaningful input into the decision-making process.

NAME: David J. McGown

POSITION: Minister in Higher Education

INSTITUTION: Agape House at University of Illinois - Chicago Circle
1046 West Polk
Chicago, IL 60607
Phone: (312) 666-2676

PRIMARY DISCIPLINE: Sociology and Anthropology
Theology and Ethics

ACTIVITY: Theory or Model Development
Instruction
Lobbying
Governance

PRIMARY POPULATION: Undergraduate

SUMMARY: Reverend McGown helps people conceptualize alternative futures and to move toward a less consumptive life-style and a more effective caring for others. He works with students at the University of Illinois, Chicago Circle, with church constituencies and with the Illinois State Board of Higher Education, through conferences and seminars, informal correspondence and luncheons, and sometimes through the more public settings of petition drives.

NAME: John McHale

POSITION:q Director

INSTITUTION: Center for Integrative Studies
State University of New York
Binghamton, N.Y. 13901
Phone: (607) 798-2871

PRIMARY DISCIPLINE:
Aesthetics/Applied Arts
Communications and Linguistics
Ecology/Environmental Science
Sociology and Anthropology

ACTIVITY:

Theory or Model Development	Proposal Writing/Grantsmanship
Research Methodology	Publication
Data Collection and Analysis	Consulting
Research Administration	Arts

PRIMARY POPULATION:
Graduate and Professional
General Public
Technical/Specialist

FUNDING: Basic budget from University plus external grants from various institutions, public and private

SUMMARY:

The Center for Integrative Studies in the School of Advanced Technology is concerned with "the long-range social and cultural implications of scientific and technological developments. It seeks:

1. To analyze and project the large-scale future consequences of ongoing social, political, economic, and technological trends;
2. to function as a 'sensing unit' concerned with the effect of such trends on the quality of the human environment; and
3. to formulate guidelines for the study and planning of future developments, with emphasis on social and cultural trends."

"The Center's objective is to assemble and 'integrate' the contributions of many disciplines for the identification and evaluation of the critical interactions of technology and society," and to "bring this transdisciplinary and 'social consequences' emphasis into overall educational planning; to provide a focus for graduate education and research; and to act as an information and communication center." The Center seeks to link itself with organizations with similar objectives on an international level, and it issues a variety of working papers and reports derived from its ongoing studies.

NAME: John McLeod

POSITION: Self-Employed
P.O. Box 994
La Jolla, CA 92037
Phone: (714) 454-0966

PRIMARY DISCIPLINE: Engineering and Technology
Mathematics and Computer Science
Simulation of Social Systems

ACTIVITY: Theory or Model Development
Research Methodology
Publication
Consulting

PRIMARY POPULATION: Technical/Specialist Public

SUMMARY: Dr. McLeod's research, writing and publishing concern the development of technology "to improve out understanding of the social 'problematique'" and to improve the means for disseminating this technology, primarily to politicians and other decision-makers.

The World Simulation Organization and the role of managing editor of the newsletter, Simulation in the Service of Society (S^3), are prominent among Dr. McLeod's activities.

INSTITUTION: Metropolitan Council
300 Metro Square Building
7th and Robert
St. Paul, MN 55101
Phone: (612) 227-9421

PRIMARY DISCIPLINE: Ecology/Environmental Science
Political Science and Government

ACTIVITY: Governance

PRIMARY POPULATION: General Public

FUNDING: Local, State and Federal

SUMMARY: The Metropolitan Council researches, formulates policy and implementation, and monitors for evaluation programs for the planning and coordination of development in the Twin Cities metropolitan area. It works with local government officials, legislators and concerned citizen action groups.

NAME: J. Kenneth Monts

POSITION: Assistant Professor

INSTITUTION: Rice University, ICSA
Houston, TX 77001
Phone: (713) 528-4141

PRIMARY DISCIPLINE: Mathematics and Computer Science
Sociology and Anthropology

ACTIVITY: Theory or Model Development

PRIMARY POPULATION: Undergraduate

FUNDING: Sloan Foundation

SUMMARY: Professor Monts educates undergraduate engineering students in the social sciences, with emphasis on computer modelling.

NAME: Charles L. Nearing

POSITION: Director, Instructional Media

INSTITUTION: University of California - Davis
Davis, CA 95616
Phone: (916) 752-3556

PRIMARY DISCIPLINE:
Agriculture
Biology
Communications and Linguistics
Education: Postsecondary
Engineering and Technology
Health/Medical Sciences
Law

ACTIVITY: Instructional Materials

PRIMARY POPULATION:
Undergraduate
Graduate and Professional

FUNDING: University of California - Davis Instructional and Research Budget. New Building Equipment Funds. Instructional and Research Departmental Budgets and their Innovations and/or Research Grants

SUMMARY: Instructional Media works extensively with the departments of Genetics, Engineering, Small Animal Surgery, Biology, Rhetoric, English, and the University Extension and part-time degree programs, improving university instruction using electronic media. Those faculty and students with existing interests in media use are aided, according to their goals, in developing instructional television or audio-tutorial materials. I.M. also approaches faculty who, through lack of contact, do not recognize the potentials of media in their work. Faculty support is taken as I.M.'s absolute prerequisite.

I.M. maintains a microwave and instructional television network to off-campus locations, and it maintains electronic equipment for rental and loan use. The design of physical facilities to facilitate media use in improving the teaching/learning situation is one of I.M.'s leading concerns.

NAME: Leif Pedersen

POSITION: Assistant Professor

INSTITUTION: Institute for Social Science
Rosenborggade 15[2]
11 30 Copenhagen K
Denmark

PRIMARY DISCIPLINE: Political Science and Government

ACTIVITY: Theory or Model Development
Research Methodology
Publication
Instruction
Instructional Materials

PRIMARY POPULATION: Graduate and Professional

FUNDING: The funding is via the budget for the Institute for Social Science, University of Copenhagen

SUMMARY: Professor Pedersen develops formal simulation methods of social systems which are accessible to students and researchers in political science who have no advanced mathematical knowledge. His models are based on theories from the social sciences using system dynamics techniques.

Professor Pedersen teaches graduate students preparing either to teach or to do research in political science, and he is writing a textbook in systems dynamics for political scientists.

NAME: William Phillips

POSITION: Director

INSTITUTION: Habitat Institute
10 Juniper Road
Belmont, MA 02178
Phone: (617) 489-3850

PRIMARY DISCIPLINE:
Communications and Linguistics
Ecological Science
Education: Primary and Secondary
Education: Postsecondary
Recreation and Physical Education

ACTIVITY:
Theory or Model Development
Proposal Writing/Grantsmanship
Instruction
Consulting
Alternative Life Style
Recreation

PRIMARY POPULATION:
Primary or Secondary School
Undergraduate
Adult Continuing Education
General Public

FUNDING:
Intern Tuition: 41%
Project Contracts: 21%
Donations: 38%

SUMMARY:

The Habitat Institute implements changes in behavior and values which lead to improved relationships between people and their environment. Its efforts are at the local level, in towns, suburbs, rural areas and with environmental organizations.

The Institute defines goals, derives objectives and then, with a workforce of about forty people, sets a project in motion, with follow-up evaluation to improve the means to reach the desired objectives.

Part of the Institut ... is training interns to be effective problem-solvers and change-agents in environ-

mental areas, and it concentrates on developing a multi-disciplinary--or non-disciplinary--working style.

The Institute intends to establish similar centers around the U.S. and plans to be financially self-sufficient by 1980.

NAME: George A. Pierce

POSITION: Executive Director, M.A. Program in Public Policy Studies
Doctoral Candidate, Higher Education

INSTITUTION: Claremont Graduate School
M.A. Program in Public Policy Studies
Claremont, CA 91711
Phone: (714) 626-8511 Ext.3988

PRIMARY DISCIPLINE: Education: Postsecondary
Political Science and Government

ACTIVITY:

Theory or Model Development	Proposal Writing/Grantsmanship
Research Methodology	Instructional Materials
Data Collection and Analysis	CConsulting
Research Administration	Governance

PRIMARY POPULATION: Graduate and Professionals
General Public

FUNDING: Institutional and out-of-pocket

SUMMARY: The Program in Public Policy Studies seeks to provide a public policy/political model of the state-wide higher education system to be utilized in a heuristic and manipulative fashion by members of higher education state-wide coordinating bodies, individuals concerned with state-wide governmental relations, and the general public concerned with public policy of higher education. Basic research, Delphi survey, cross-impact matrix analysis, systems analysis, and computer technology are the program's primary approaches.

Presently the study is limited to the California system, but, contingent on funding, the program hopes to expand to a regional/national level.

NAME: Ronald J. Pion

POSITION: Professor of Obstetrics- and
Professor of Population Studies

INSTITUTION: University of Hawaii
School of Medicine/School of Public Health
Kapiolani Hospital
1319 Punahou Street
Honolulu, HI 96814

Phone: (808) 955-6611

PRIMARY DISCIPLINE:
- Biology
- Business
- Communications
- Education: Primary and Secondary
- Education: Postsecondary
- Health/Medical Sciences
- Psychology and Psychiatry

ACTIVITY:
- Theory or Model Development
- Proposal Writing/Grantsmanship
- Publication
- Instruction
- Instructional Materials
- Mass Media
- Consulting
- Production (Sales, Manufacturing, etc.)

PRIMARY POPULATION:
- Primary or Secondary School
- Undergraduate
- Adult Continuing Education
- Graduate and Professional
- General Public
- Technical/Specialist Public

SUMMARY: Dr. Pion is developing project "Hospital Start" to take advantage of the fact that 98% of all U.S. births occur in hospital with "mother 'captive' for approximately three days and highly motivated to be a good parent."

The project seeks to universalize, through in-hospital contact and through an audiocassette series for post-hospital learning, what is known in terms of infants' needs. Included in the project is research to "enhance development of self-esteem in children by 'grope and sequence' curriculum development with competency measurements used for

evaluation at 18 months, 3 years and 5 years." A foreseen spin-off is improvement in parental self-worthiness.

At present the project is unfunded. Dr. Pion hopes to interest manufacturers of baby products, in particular the Johnson Foundation, in the project's merits. A second priority project is the use of sanitary napkins/tampons as a vehicle for information dispersal. Two message systems for insertion in the cartons would be: 1. How to increase your chances of producing a healthy baby; and 2. How to not begin pregnancy.

Dr. Pion has also recently completed eleven 30-minute color videotape segments for an Educational Television series on parent education entitled Hand-in-Hand.

NAME: O. Rademaker

POSITION: Professor and Head of Measurement and Control Group

INSTITUTION: Eindhoven University of Technology
P.O. Box 513
Eindhoven
Netherlands

Phone: Eindhoven 40-472885

PRIMARY DISCIPLINE:
Business and Management
Education: Postsecondary
Engineering and Technology
Mathematics and Computer Science
Control and Systems Science

ACTIVITY:
Theory Development
Research Methodology
Research Administration
Publication
Instruction
Consulting

PRIMARY POPULATION:
Graduate and Professional
General Public
Technical/Specialist Public

FUNDING:
Normal Government Funding of the University
Some additional funds allocated by Council of Ministers

SUMMARY:

"The name Global Dynamics was chosen to refer to the project as well as the project group, the word Global indicating the object as well as the character of the study.

"Starting from mathematical models set up by others, the project group, in close consultation with specialists with respect to social science and/or management, aims at making a control and systems science contribution to solving the problems brought up for discussion by the Club of Rome."

NAME: Susan Redlich

POSITION: Environmental Planner

INSTITUTION: Society for Protection of New Hampshire Forests
2 South State
Concord, NH 03301
Phone: (603) 224-9945

PRIMARY DISCIPLINE: Ecology/Environmental Science

ACTIVITY: Publication
Instruction
Instructional Materials
Lobbying

PRIMARY POPULATION: Adult Continuing Education
General Public

FUNDING: Grants: N.H. Council for the Humanities and
N.H. Tomorrow

SUMMARY: The Society promotes informed decision-making by townspeople on matters regarding land use policies and growth guidance mechanisms. It contacts local civic leaders, asks them to identify land use problems, and then structures an educational program to meet informational needs for their solution.

The Society has published a guidebook on managing local growth and has developed a series of region-wide workshops.

The Global Dynamics group was assembled early in 1972 and its activities still follow much the same program, except that in the middle of 1973 it was decided "to shift from studying world models, lecturing and writing, to a broad orientation concerning the application of mathematical models to non-technological systems." The emphasis subsequently has returned to the analysis and control of world models, with the study of broad, non-technological systems maintained as a continuing effort.

The project group periodically publishes in English progress reports elaborating the details of its work and strives to make its work intelligible to decision-makers and the general public.

NAME: William K. Reilly, President
Gordon Binder, Assistant to the President

INSTITUTION: The Conservation Foundation
1717 Massachusetts Avenue, N.W. Room 300
Washington, D.C. 20036
Phone: (202) 265-8882

PRIMARY DISCIPLINE: Ecological Science
Law
Political Science and Government

ACTIVITY:

Data Collection and Analysis	Instructional Materials
Research Administration	Mass Media
Proposal Writing/Grantsmanship	Instruction
Publication	Consulting

SUMMARY: "The Conservation Foundation is a non-profit policy research and information organization specializing in environmental studies, with particular emphasis on land use issues." The Foundation has especial interest in citizen involvement in resource management. International resource and environmental problems also appear among its primary concerns, and the Foundation produces a variety of material and organizational resources, including course syllabi, books and articles, and workshop designs.

NAME:	Everett M. Rogers
POSITION:	Professor of Journalism and Population Planning
INSTITUTION:	Department of Population Planning University of Michigan Ann Arbor, MI 48104 Phone: (313) 763-1584
PRIMARY DISCIPLINE:	Communications and Linguistics Sociology and Anthropology
ACTIVITY:	Theory or Model Development Research Methodology Instruction
PRIMARY POPULATION:	Graduate and Professional
FUNDING:	U.S. Aid; State of Michigan

SUMMARY: Professor Rogers instructs doctoral students in mass communication and professionals in population planning.

NAME: Robert Roper

POSITION: Director of Research

INSTITUTION: Thomte-Roper, Inc.
59 Commercial Wharf
Boston, MA 02110
Phone: (617) 742-5495

PRIMARY DISCIPLINE: Business and Management
Economics
Mathematics and Computer Science
Political Science and Government

ACTIVITY: Theory or Model Development
Data Collection and Analysis
Research Administration
Lobbying
Consulting

PRIMARY POPULATION: Technical/Specialist Public
Financial Community

FUNDING: Business Income

SUMMARY:

In order to influence growth policies, Thomte-Roper, Inc., is creating a strong finance/resource base and channels of access to decision-makers in business and government, in particular, managers of institutional capital, business leaders dealing in primary commodities, elected government officials, and career government officials.

Capital management in world commodity markets is among its "parallel efforts to develop management control over a substantial pool of capital and technical competency in understanding and predicting complex, interrelated systems."

NAME: Harold W. Rosenthal

POSITION: Program Associate for International Economic Affairs

INSTITUTION: Rockefeller Brothers Fund
30 Rockefeller Plaza
New York, N.Y. 10020

PRIMARY DISCIPLINE: Business and Management
Economics
Political Science and Government

ACTIVITY: Grant-Making

PRIMARY POPULATION: Graduate and Professional
General Public
Technical/Specialist Public

FUNDING: The Rockefeller Brothers Fund

SUMMARY: "The Rockefeller Brothers Fund makes grants to local, national and international philanthropic organizations." The Fund concentrates its grants "in several fields which it is believed provide effective points of entry looking toward solutions of overall societal problems. These include: population growth and distribution; conservation and constructive use of natural resources; equal opportunity; quality of life, including religion, values and the arts; and education."

NAME: Howard R. Rowland

POSITION: Professor, Mass Communications and Educational Administration; Director of Information Services

INSTITUTION: St. Cloud State College
St. Cloud, MN 56301
Phone: (612) 255-3151

PRIMARY DISCIPLINE: Communications and Linguistics
Education: Postsecondary

ACTIVITY: Data Collection and Analysis
Publication
Instruction
Mass Media
Consulting

PRIMARY POPULATION: Undergraduate
Adult Continuing Education
Graduate/Professional
General Public

FUNDING: Operating Budget for the Office of Information Services (State of Minnesota/State College System/ St. Cloud State College)

SUMMARY: By disseminating relevant information in classes and through publications, news releases, photographs, speeches and public meetings, students and leaders in business, industry and government are exposed to conditions and techniques which encourage and assist orderly planning to improve the quality of life and to avoid economic and ecological disasters. College resources, the people, materials and equipment, are stressed as valuable means to conduct research and coordinate planning in the solution of problems by governmental and other policy-making organizations.

NAME: W.E. Schiesser

POSITION: Professor of Engineering and Faculty Associate in the Computing Center

INSTITUTION: Lehigh University
Computer Center
Bethlehem, PA 18015

PRIMARY DISCIPLINE: Mathematics and Computer Science

ACTIVITY: Theory or Model Development

PRIMARY POPULATION: Undergraduate

FUNDING: NSF Science Faculty Fellowship

SUMMARY:

With his guidance, Professor Schiesser's students use and develop computer simulation programs for socio-economic systems. Dr. Schiesser has developed Fortran IV programs and plotting routines for Jay Forrester's World 2 model, the Behrens natural resource utilization model, the Boyd modification of the World 2 model, and for the Battelle Globe 6 model. For each of these programs, a source deck, listing and sample output are available for $30.00. These programs are being used on more than 350 college and university campuses.

Recently a Fortran IV introductory world food model was completed and a world energy model is near completion.

NAME: A.J.G. Shaw

POSITION: Co-ordinator - "Future" Studies

INSTITUTION: Ashridge Management College
Berkhamsted, Hertfordshire
England HP 4 1NS

Phone: Little Gaddesden 3491

PRIMARY DISCIPLINE: Business and Management
Ecology/Environmental Science
Mathematics and Computer Science

ACTIVITY: Theory or Model Development
Instruction
Consulting
Alternative Life Style

PRIMARY POPULATION: Adult Continuing Education
Graduate and Professional

SUMMARY: Dr. Shaw works with the senior management of organizations to develop a recognition of the value of future planning for present decison-making. And he endeavors to bridge the gaps between planners and doers.

NAME: Walter Sikes

POSITION: Self Employed Consultant
111 W.N. College Street
Yellow Springs, OH 45387
Phone: (513) 767-1388

PRIMARY DISCIPLINE:
Business and Management
Education: Postsecondary
Psychology and Psychiatry

ACTIVITY:
Theory or Model Development
Data Collection and Analysis
Research Administration
Publication
Consulting

PRIMARY POPULATION:
Undergraduate
Graduate and Professional
General Public

NAME: J. David Singer

POSITION: Professor of Political Science

INSTITUTION: Mental Health Research Institute
University of Michigan
Ann Arbor, MI 48104
Phone: (313) 764-9548

PRIMARY DISCIPLINE: History and Geography
Military Science
Political Science and Government

ACTIVITY: Theory or Model Development
Research Methodology
Data Collection and Analysis
Proposal Writing/Grantsmanship
Publication
Instruction
Consulting

PRIMARY POPULATION: Undergraduate
Graduate and Professional

FUNDING: National Student Foundation

SUMMARY: Professor Singer has done extensive work on the nature of war in international relations.

NAME: Larry J. Smith

POSITION: Assistant Professor and Chairman Economics Option

INSTITUTION: College of Communications Science
University of Wisconsin - Green Bay
Green Bay, WI 54302

Phone: (414) 465-2335
(414) 465-0952

PRIMARY DISCIPLINE:
Agriculture
Ecology/Environmental Science
Economics
Sociology and Anthropology

ACTIVITY:

Theory or Model Development	Publication
Research Methodology	Instruction
Data Collection and Analysis	Instructional Materials
Research Administration	Consulting
Proposal Writing/Grantsmanship	Alternative Life Style

PRIMARY POPULATION:
Undergraduate
Adult Continuing Education
Graduate and Professional
General Public

NAME: Dave Steffenson

POSITION: Campus Minister and Lecturer in Modernization Processes

INSTITUTION: Ecumenical Center
University of Wisconsin - Green Bay
Green Bay, WI 54302
Phone: (414) 465-0250

PRIMARY DISCIPLINE: Education: Postsecondary
Philosophy and Religion
Sociology and Anthropology

ACTIVITY: Proposal Writing/Grantsmanship
Publication
Instruction
Instructional Materials

PRIMARY POPULATION: Undergraduate
Adult Continuing Education
General Public
Technical/Specialist Public

FUNDING: Church Funds; Varied Private and Governmental Organizations

SUMMARY: Developing curricula, organizing conferences, speaking and publishing, and organizing task forces for institutional change, Dr. Steffenson fosters ethical and religious considerations in environmental education. He works primarily within the university at Green Bay, but also with adult education classes, churches, and special groups, such as the Conservation Education Association. He is now organizing a local task force for long-range planning.

NAME: Peter G. Stillman

POSITION: Assistant Professor of Political Science

INSTITUTION: Vassar College
Poughkeepsie, N.Y. 12601
Phone: (914) 452-7000

PRIMARY DISCIPLINE: Philosophy
Political Science and Government

ACTIVITY: Theory or Model Development
Publication
Instruction
Alternative Life Style

PRIMARY POPULATION: Undergraduate

SUMMARY: Professor Stillman's research concerns the nature of an ecologically sound and humane society and the means to its development.

NAME: Robert E. Sweeney

POSITION: Editor, Technical Writer

INSTITUTION: System Dynamics Group - MIT
E40-253
Cambridge, MA 02138
Phone: (617) 354-4598

PRIMARY DISCIPLINE: Business and Management

ACTIVITY: Theory or Model Development
Proposal Writing/Grantsmanship
Publication
Instructional Materials

PRIMARY POPULATION: Graduate and Professional
General Public

FUNDING: Rockefeller Brothers Fund

SUMMARY: "The main focus of our research is the development of a national socio-economics model of the system dynamics variety. The model should lead to improved policies for contending with such chronic issues as inflation and the one-time transition from growth into equilibrium."

The model has been developed over the last two years and should be operating by January, 1975. The conclusions from preliminary models are being presented "to inform and win the support of influential and respected citizens from a great variety of professions," especially national and regional corporate and governmental decision-makers. Several technical and general publications concerning the project are planned.

NAME: Carsten Tank-Nielsen

POSITION: Research Scientist

INSTITUTION: Transportøkonomisk Institutt
Stasjonsveien 4, Oslo 3
Norway

(Until August 1975:
System Dynamics Group
Thayer School of Engineering
Dartmouth College
Hanover, NH 03755)

PRIMARY DISCIPLINE: Engineering and Technology

ACTIVITY: Theory or Model Development
Research Methodology
Data Collection and Analysis

PRIMARY POPULATION: General Public
Technical/Specialist Public

FUNDING: Royal Norwegian Council for Scientific and Industrial Research

SUMMARY: A general dynamic model which can be used by government decision-makers to evaluate policy recommendations in the transportation sector is a major project goal. At present the consistency of specific policies with the overall goals for Norway's development are tested using techniques from system dynamics. In particular the role of transportation in the concentration of people and production is analyzed.

NAME: A. Dan Tarlock

POSITION: Professor

INSTITUTION: Indiana University School of Law
Bloomington, IN 47401
Phone: (812) 337-6455

(1974-1975:
University of Pennsylvania School of Law
3400 Chestnut Street
Philadelphia, PA 19174
Phone: (215) 594-6867

PRIMARY DISCIPLINE: Law

ACTIVITY: Publication
Instruction

PRIMARY POPULATION: Graduate and Professional

SUMMARY: Professor Tarlock teaches students how to conceptualize issues of the distribution of growth over geographical areas.

NAME: Jan Tinbergen

POSITION: Professor Emeritus

INSTITUTION: Erasmus University
Haviklaan 31
The Hague 2023
Rotterdam 3016

Phone: The Hague 070-394884

PRIMARY DISCIPLINE: Economics
Education: Postsecondary

ACTIVITY: Publication
Consulting

PRIMARY POPULATION: General Public
Technical/Specialist Public

FUNDING: Own income; University of Rotterdam

SUMMARY: Professor Tinbergen is engaged in a follow-up study of the Club of Rome's Limits to Growth report. The research results are used to convince government officials on questions of economic planning and to specify needed institutions and reforms.

NAME: William B. Torbert

POSITION: Associate Professor

INSTITUTION: Harvard Graduate School of Education
Cambridge, MA 02138
Phone: (617) 495-3571

PRIMARY DISCIPLINE:
Business and Management
Education: Postsecondary
Psychology and Psychiatry
Sociology and Anthropology
Organizational Behavior

ACTIVITY:

Theory or Model Development	Instruction
Research Methodology	Instructional Materials
Data Collection and Analysis	Consulting
Publication	Alternative Life Style

PRIMARY POPULATION: Graduate and Professional

SUMMARY:

Professor Torbert is engaged in teaching, meditation, group dynamics, personal counseling and writing to awaken persons "to the scale and excitement of a twenty-year (18-40) period of adult development which is necessary to attain full contact with one's own intuition and to become effective as an agent of constructive social change/ stability."

Professor Torbert is formulating theories of 'post-bureaucractic' organizational forms which he names "openly chosen structures," "foundational communities," and "liberating disciplines." He has also developed a proposal for a television series which would be part of an experiment in creating and exploring alternative social futures.

NAME: John J. Uhran, Jr.

POSITION: Associate Professor

INSTITUTION: University of Notre Dame
Department of Electrical Engineering
Notre Dame, IN 46556
Phone: (215) 283-7423

PRIMARY DISCIPLINE: Economics
Engineering and Technology
Mathematics and Computer Science

ACTIVITY: Theory or Model Development
Data Collection and Analysis
Proposal Writing/Grantsmanship
Instruction

PRIMARY POPULATION: Undergraduate
Graduate and Professional

SUMMARY: Dr. Uhran's research is directed toward an overview of the problems of growth in the global system.

NAME: Conrad Hal Waddington

POSITION: Professor Animal Genetics
Director, School of the Man Made Future

INSTITUTION: University of Edinburgh
Edinburgh, Scotland
U.K.

Phone: Edinburgh -31-667-1011

PRIMARY DISCIPLINE: Education: Postsecondary

ACTIVITY: Publication
Instruction

PRIMARY POPULATION: Undergraduate
Adult Continuing Education
General Public

FUNDING: Small University endowment, attached to Dr. Waddington's Chair of Genetics, useable at his discretion; Grant from Leverhulme Foundation for two assistants.

SUMMARY: Dr. Waddington presently is designing a second-year undergraduate course to be a general survey of all aspects of the 'futures problem', which he hopes will be accepted as counting toward a degree in several different Faculties. Voluntary courses of lectures are being given and two textbooks are being published.

Dr. Waddington has also initiated a conference on "The Future as an Academic Discipline" to be sponsored by the CIBA Foundation, February, 1975.

NAME: K.E.F. Watt

POSITION: Professor

INSTITUTION: Department of Zoology
University of California - Davis
Davis, CA 95616
Phone: (916) 752-1558

PRIMARY DISCIPLINE:
Ecology/Environmental Science
Economics
Engineering and Technology
Mathematics and Computer Science

ACTIVITY:

Theory or Model Development	Instruction
Research Methodology	Instructional Materials
Data Collection and Analysis	Lobbying
Research Administration	Consulting
Proposal Writing/Grantsmanship	Alternative Life Style
Publication	Mass Media

PRIMARY POPULATION:
Undergraduate
Adult Continuing Education
Graduate and Professional
General Public
Technical/Specialist Public

FUNDING: National Science Foundation (R.A.N.N.) GI-27

SUMMARY: Professor Watt is developing computer simulation techniques to select optimal strategies for the attainment of U.S. national goals. To present this work to government, industry and business policy-makers, consultation is augmented by slides, books and articles.

NAME: John G. Welles

POSITION: Head, Industrial Economics Division

INSTITUTION: Denver Research Institute
University of Denver
P.O. Box 10127
Denver, CO 80210
Phone: (303) 753-3502

PRIMARY DISCIPLINE: Ecology/Environmental Science
Economics
Engineering and Technology

ACTIVITY: Research Administration
Publication

PRIMARY POPULATION: Graduate and Professional

SUMMARY: Dr. Welles writes, "My activities are (1) to try to figure out who is likely to be most right in the limits debate and why; (2) to relate this position to what I happen to be working on at the moment, whether technology transfer research, innovation studies, economic development programs, energy forecasting, etc., and ask what it means in each context; and (3) then to pass on to others what I think I have learned via: research reports, talks, articles, and conversations."

NAME: Kenneth Winetrout

POSITION: Margaret C. Ells Professor

INSTITUTION: American International College
Springfield, MA 01109
Phone: RE 75331

PRIMARY DISCIPLINE: Education: Postsecondary

ACTIVITY: Data Collection and Analysis
Publication

PRIMARY POPULATION: Graduate and Professional

SUMMARY: In the areas of growth, design and planning, Dr. Winetrout has contributed articles to scholarly journals and the press, and he has written a study titled Education Looks Ahead--Or Does It?

NAME: Erich Zahn

POSITION: Assistant Professor

INSTITUTION: Industrieseminar der Universität Mannheim
D-68 Mannheim
Schloss, Germany
Phone: 0621-292-5524

PRIMARY DISCIPLINE:
Business and Management
Economics
Mathematics and Computer Science

ACTIVITY:
Theory or Model Development
Research Methodology
Data Collection and Analysis
Proposal Writing/Grantsmanship
Publication
Instructional Materials
Consulting

PRIMARY POPULATION:
Graduate and Professional
Technical/Specialist Public

FUNDING: VW Foundation

SUMMARY: Dr. Zahn is engaged in problem formulation, data collection, computer simulation, policy formulation and testing, and model validation to create and explore principles for innovative strategic planning. The maximum participation of top management of industry and government is sought in this effort.

INDEXES

INDEX OF DISCIPLINES

Aesthetics, 14, 21, 40, 78

Agriculture, 32, 52, 62, 65, 73, 83, 102

Biology, 7, 36, 40, 52, 65, 83, 88, 111

Business and Management, 5, 6, 12, 19, 33, 34, 36, 38, 40, 42, 48, 52, 57, 59, 60, 62, 65, 73, 88, 90, 95, 96, 99, 100, 105, 109, 115

Chemistry and Physics, 36, 72

Communications and Linguistics, 5, 14, 25, 34, 36, 38, 40, 50, 52, 78, 83, 85, 88, 94, 97

Cosmology, 24

Earth Science, 36, 54, 65

Ecological Science, 3, 8, 10, 18, 25, 29, 30, 32, 34, 36, 40, 43, 45, 48, 50, 52, 54, 65, 73, 75, 78, 81, 85, 92, 93, 99, 102, 112, 113, 114

Economics, 8, 10, 15, 18, 19, 22, 25, 34, 36, 40, 43, 45, 47, 52, 59, 60, 62, 63, 65, 68, 73, 95, 96, 102, 108, 110, 112, 113, 115

Education--Primary/Secondary, 4, 17, 30, 40, 50, 55, 68, 69, 75, 85, 88

Education--Postsecondary, 4, 8, 17, 31, 35, 38, 40, 47, 48, 50, 54, 55, 57, 59, 62, 64, 65, 68, 71, 75, 83, 85, 87, 88, 90, 97, 100, 103, 108, 109, 111, 114

Engineering and Technology, 10, 19, 36, 41, 52, 54, 59, 65, 80, 83, 90, 106, 110, 112, 113

Health and Medicine, 27, 31, 35, 38, 40, 65, 83, 88

History and Geography, 40, 65, 101

Law, 40, 52, 59, 65, 83, 93, 107

Mathematics and Computer Modeling, 3, 7, 10, 18, 19, 24, 36, 59, 65, 80, 82, 90, 95, 98, 99, 105, 108, 110, 112, 115

Military Science, 101

Philosophy and Religion, 16, 25, 40, 64, 65, 67, 72, 77, 103, 104

Political Science and Government, 10, 12, 18, 19, 20, 21, 25, 33, 34, 35, 40, 50, 52, 59, 62, 63, 65, 81, 84, 87, 93, 95, 96, 101, 104

Psychology/Psychiatry, 10, 12, 25, 40, 72, 88, 100, 109

Recreation, 29, 40, 85

Sociology and Anthropology, 10, 15, 24, 25, 31, 40, 42, 48, 62, 65, 67, 77, 78, 82, 94, 102, 103, 109

INDEX OF GEOGRAPHICAL LOCATIONS

United States

- Alaska, 63
- California, 16, 25, 35, 48, 80, 83, 87, 112
- Colorado, 40, 47, 75, 113
- District of Columbia, 5, 8, 13, 17, 33, 34, 52, 57, 93
- Hawaii, 20, 73, 88
- Illinois, 42, 77
- Indiana, 22, 107, 110
- Maryland, 18
- Massachusetts, 29, 30, 68, 69, 85, 95, 105, 109, 114
- Michigan, 50, 94, 101
- Minnesota, 81, 97
- New Hampshire, 92, 106
- New Mexico, 42
- New York, 4, 6, 27, 55, 64, 65, 71, 78, 96, 104
- Ohio, 100
- Oregon, 59
- Pennsylvania, 3, 38, 98, 107
- South Dakota, 32
- Texas, 43, 45, 82
- Virginia, 12, 36, 54
- Washington, 14, 24
- Wisconsin, 31, 41, 62, 102, 103

Argentina, 72
Canada, 21
Denmark, 84
Dominican Republic, 68
England, 10, 99
Finland, 67
France, 15
Germany, 115
Netherlands, 90, 108
Norway, 106
Poland, 19
Scotland, 111
Sweden, 60
Switzerland, 7

INDEX OF ACTIVITIES

Alternative Life Style, 5, 14, 16, 20, 25, 50, 52, 72, 85, 99, 102, 104, 109, 112

Arts, 5, 14, 78

Consulting, 4, 8, 10, 12, 17, 19, 20, 27, 30, 34, 38, 42, 43, 45, 48, 50, 52, 55, 59, 67, 69, 75, 78, 80, 85, 87, 88, 90, 93, 95, 97, 99, 100, 101, 102, 108, 109, 115

Data Collection and Analysis, 3, 8, 10, 19, 20, 22, 25, 27, 34, 38, 43, 45, 54, 57, 59, 60, 63, 65, 69, 73, 75, 78, 87, 93, 95, 97, 100, 101, 102, 106, 109, 110, 112, 114, 115

Governance, 5, 15, 29, 38, 52, 57, 71, 73, 77, 81, 87

Grantmaking, 6, 30, 96

Instruction, 3, 7, 10, 12, 16, 17, 20, 22, 34, 38, 40, 43, 45, 47, 48, 50, 54, 55, 59, 64, 65, 69, 71, 77, 84, 85, 88, 90, 92, 93, 94, 97, 99, 101, 102, 103, 104, 107, 109, 110, 111, 112

Instructional Materials, 3, 4, 5, 8, 12, 17, 20, 21, 30, 34, 38, 40, 47, 48, 50, 55, 59, 65, 69, 75, 83, 84, 87, 88, 92, 93, 102, 103, 105, 109, 112, 115

Lobbying, 5, 20, 77, 92, 95, 112

Mass Media, 5, 13, 20, 21, 27, 34, 50, 52, 88, 93, 97, 112

Production, 88

Proposal Writing/Grantsmanship, 3, 4, 20, 25, 30, 34, 43, 45, 50, 52, 57, 59, 63, 65, 69, 78, 85, 87, 88, 93, 101, 102, 103, 105, 110, 112, 115

Publication, 3, 4, 7, 8, 10, 13, 16, 18, 19, 20, 24, 25, 27, 34, 42, 43, 45, 48, 50, 52, 54, 55, 59, 63, 64, 65, 67, 73, 78, 80, 84, 88, 90, 92, 93, 97, 100, 101, 102, 103, 104, 107, 108, 109, 111, 112, 113, 114, 115

Recreation, 5, 29, 85

Research Administration, 8, 19, 20, 25, 34, 43, 45, 50, 59, 60, 63, 65, 72, 73, 78, 87, 90, 93, 95, 100, 102, 112, 113

Research Methodology, 3, 10, 18, 20, 22, 25, 42, 48, 59, 65, 68, 78, 80, 84, 87, 90, 94, 101, 102, 106, 109, 112, 115

Theory or Model Development, 3, 10, 14, 18, 19, 20, 22, 24, 25, 34, 42, 43, 45, 50, 60, 63, 64, 65, 69, 72, 73, 77, 78, 80, 82, 84, 85, 87, 88, 90, 94, 95, 98, 99, 100, 101, 102, 104, 105, 106, 109, 110, 112, 115

INDEX OF INSTITUTIONS

Agape House, 77
American International College, 114
Ashridge Management College, 99
Association of Governing Boards of Universities & Colleges, 57
Bryn Mawr College, 3
Bureau of Governmental Research & Service, University of Oregon, 59
Center for Economic Development, University of Texas, 45
Center for Growth Alternatives, 52
Center for Integrative Studies, SUNY, 78
CUNY--Hunter College, 55
Claremont Graduate School, 87
Claremont School of Theology, 16
Colorado College, 47
Committee for the Future, Inc., 34
Conservation Foundation, 93
Cornell University, 65
Dartmouth College, 106
Denver Research Institute, 113
Dominican Republic Human Resources Study Project, 68
Educational Development Center, Inc. 69
Eindhoven University of Technology, 90
The Environmental Fund, 8
Erasmus University, 108
Evergreen State College, 14
Federal Executive Institute, 12
First Communications Company, 5
French Commissariat General du Plan, 15
Fundacion Bariloche, 72
Habitat Institute, 85
Hawaii Department of Planning and Economic Development, 73
Indiana University School of Law, 107
Institute of Social, Economic Government Research, 63
Institute for Social Science, 84

Instructional Media, 83
International Ecosystems University, Forum International, Inc., 48
Johns Hopkins University Metro Center, 18
Lehigh University, 98
Management Institute for National Development, 4
Massachusetts Institute of Technology, 105
Massachusetts Department of Natural Resources, 29
Mental Health Research Institute, 101
Metropolitan Council, 81
Mitre Corporation, 36
National Education Association, 17
National Science Foundation, 33
New York University, 71
Northwestern University, 42
Ontario Educational Communications Authority, 21
Planned Parenthood Federation of America, 27
Planning Dynamics, Inc., 38
Poland Planning Commission of Ministry Council, 19
Research Institute of the Lutheran Church, 67
Rice University, 82
Rockefeller Brothers Fund, 6, 30, 96
St. Cloud State College, 97
Self-Employed, 80, 100
Society for Protection of New Hampshire Forests, 92
South Dakota State University, 32
Stanford Research Institute, 25
SUNY--Binghamton, 78
SUNY--Geneseo, 64
Swedish Ministry of Finance, 60
Thomte-Roper, Inc., 95
Thorne Ecological Institute, 75
Transportokonomisk Institutt, 106
U.S. Geological Survey, 54
University of Alaska, 63
University of California--Davis, 83, 112

University of California--Los Angeles, 35
University of Edinburgh, 111
University of Hawaii, 20, 88
University of Illinois--Chicago Circle, 77
University of Mannheim, 115
University of Michigan--Ann Arbor, 50, 94, 101
University of Notre Dame, 22, 110
University of Oregon, 59
University of Sussex, 10
University of Texas--Austin, 43, 45
University of Washington, 24
University of Wisconsin--Green Bay, 31, 62, 103
University of Wisconsin--Madison, 41
University Without Walls--Loretto Heights College, 40
University of Zurich, 7
Vassar College, 104
World Population Society, 13

THE SCIENCE MUSEUM OF MINNESOTA
OCCASIONAL PAPERS ON THE FUTURE

Since its founding in 1907, The Science Museum of Minnesota, a non-profit educational institution, has endeavored to serve the public of the State of Minnesota and the surrounding regions through the development of high quality programming focusing on four questions: What is humankind? Where are we from? Where are we now? Where is humankind going? It is supported primarily by private funding which contributes to its abilities to perform objectively and with its own style of excellence. The Museum sees itself uniquely as a middle ground or public forum where the interest and expertise of various sectors of the community--academia, business and industry, government and special interest groups--can interact.

The Futures Studies Department of The Science Museum of Minnesota has a specific role to play in helping the Museum realize answers to its four questions--specifically the last question, "Where is humankind going?" It is the department's function to help the public explore and assess the alternative futures available to them in the medium and far futures of five to fifty years hence. Those alternatives will range from considerations of specific changes in technology which have long-range implications to changes in whole systems which might alter life-styles and values. In general, the department does not worry so much about the "what is-ness" of objects so much as the "so what-ness" of them.

In order to accomplish these examinations of alternative futures, the department plans to offer both exhibits and educational programs. The goal of both of these routes will be to significantly change the public's attitude toward the worth of futures thinking. If the department is successful, people will begin to examine the long-term consequences of acts, the interrelationships of changes and innovations, the ways in which large, complex systems respond to changes, and the legitimacy of trying to design their own futures. The department wishes to awaken the awareness in the citizens of Minnesota and the surrounding region that there is validity and significance in thinking about their possible futures. The Occasional Papers on the Future are part of that forum.

Additional copies or microfiche of this paper may be obtained from:

Futures Studies Department
Science Museum of Minnesota
30 East 10th Street
St. Paul, Minnesota 55101